

A volume in the

DOUGLASS SERIES IN EDUCATION,
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UNIVERSITY OF COLORADO

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TEACHING IN ELEMENTARY SCHOOL

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THE RONALD PRESS COMPANY, NEW YORK

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PRINTED IN THE UNITED STATES OF AMERICA

PREFACE

This book is a comprehensive treatment of the fundamental theory and practice of teaching in American elementary schools. It is intended for use by students in courses in elementary education emphasizing methods and by teachers in service who wish to acquaint themselves with modern trends.

Elementary education as considered in this book encompasses the all-round growth of children. Its objective is the acquisition of skills, attitudes, ideals, interests, concepts, and information that will help children to improve their adjustment in the home, at work, at play, and in the community. Attainment of this objective depends upon the individual child's having sound mental and physical health, which means that all his potentialities must be developed into a well-integrated and balanced personality. This calls for a maximum of not too closely directed self-expression and a minimum of frustration and detailed direction, a great amount of successful experience and feeling of belonging and not a great deal of failure, social isolation, or feelings of insecurity. Among the modern practices designed to achieve these ends, two which are emphasized in this discussion are the avoidance of methods which have been found to arouse unnecessary worry in the child's mind and the use of cooperative learning activities as a means of developing the social side of his personality.

Most of the chapters deal with everyday activities of the modern classroom teacher. In many schools these now require a knowledge of such concepts and techniques as learning outcomes, creative learning, discussion procedure, functional units, use of audio-visual aids, and study of the community, all of which are described and explained in this book. The classroom teacher must also be equipped to take the lead in pupils' activities, to act as counselor, to measure and evaluate pupil growth, to aid in planning the curriculum, and to use research materials, and all these duties are fully discussed. The volume concludes with tested advice on the personal, professional, and economic problems of teachers.

The intention of the authors is to synthesize in this volume the widely accepted modern views of the elementary school teacher's functions. They have no "new" philosophy or procedure to present, and

they do not subscribe to the idea that the elementary school exists in a vacuum, with problems unrelated to those of secondary schools or of society in general. This type of approach to the fundamental principles and methods of teaching has met with a generous measure of approval in a related publication in the series in which this volume appears.*

The authors have a combined experience in the elementary school field that includes teaching in a one-room rural school and in city schools, acting as supervisor and as superintendent of schools in a city system, supervising student teachers in elementary school, teaching courses in various aspects of pre-service and in-service education of elementary school teachers and principals, and advising and lecturing to elementary school teachers in scores of cities in various parts of the United States.

In using this book as text, instructors will find it adaptable to their own methods of teaching. The basic principles of education presented are those commonly accepted, and there is no special emphasis on any one of the various modern classroom philosophies. Instructors can therefore employ the textbook for basic discussion purposes and supplement it with such special assignments as they wish.

February, 1950

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* Harl R. Douglass and Hubert H. Mills, *Teaching in High School*, New York: The Ronald Press Co., 1948.

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TEACHING IN
ELEMENTARY SCHOOL

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Chapter 1

THE OPPORTUNITIES AND RESPONSIBILITIES OF THE ELEMENTARY SCHOOL TEACHER

1. MODERN VS. EARLIER TEACHING

Organization of the Elementary Grades.—In the middle half of the nineteenth century, the graded elementary school replaced the separate and relatively ungraded reading and writing schools and primary schools. The term “graded school” was replaced by the term “elementary school.” Grades one, two, and three are designated as primary, grades four, five, and six as intermediate, grades seven and eight as the upper grades. In every state the large majority of children of appropriate age of all the people, irrespective of economic, religious, social, or racial backgrounds attend elementary school. The length of the annual school term has steadily increased until it now averages nearly nine months. Throughout the development of the elementary school system the basic pattern of a free education for all children has held its ground and therefore may be thought of as a “one track system.” The fundamental skills or Three R’s which are imperative to the progress of learning of an individual and of intelligent participation of citizens in our democracy have maintained their place in the curriculum throughout the history of American education. Since children from all levels of society meet daily to work and to play together, the elementary school always has been and will continue to be one institution in the American way of life that will be a powerful influence in preserving our democracy.

Comparison of Earlier System with Modern System.—A comparison of instructional materials and methods of the pioneer school with instructional materials and methods of the modern school reveals that the evolutionary progress has been very marked. The major influences that have brought about the change are rooted in educational philosophy and in the scientific movement, philosophy having influenced the aims of education and content of curriculum, and the scientific movement causing educators to become conscious of results and of

the most effective means of securing those results. Educators and teachers have become very critical about the effect that methods, content, and materials have on the growing child whose position in the educational scheme has changed from that of preparing merely for adult life to that of preparing as well to live a full life day by day.

The simple curriculum of reading, writing, and arithmetic of our forefathers has been replaced today by a much more complex curriculum. The Three R's have maintained their place; but instead of being the end in instruction as they were in the early days, today they serve as fundamental tools toward an end in learning. In addition to the Three R's, today's curriculum includes, for example, the following areas: music, excursions, directed and free play, health units, audio and visual aids, and safety units. Emphasis also is being placed upon creative work, such as art, through which the child expresses his attitudes, impulses, and appreciations. By making it possible for the child to enjoy a variety of experiences, he is more likely to develop those attitudes, appreciations, and understandings which are basic in an emotionally stable individual.

In comparing the instructional materials for the pioneer children with materials of today, we note that the evolutionary progress has been very marked. Children in the pioneer schools had one basic primer, for example, *The New England Primer*. The first lessons in this primer were devoted to the alphabet, sound of letters, and syllables, beginning with two-letter syllables, followed by three-letter syllables, then four-letter syllables, etc. The content of the sentences emphasized concepts based on religious teachings and the Bible. Today the child reads many preprimers and primers in the first grade. The books have vivid pictures which are filled with action. The content consists of stories and factual information of interest to the children. The selection of reading materials is based upon research and the judgment of teachers.

Early spellers contained long lists of words of four, five, or more syllables. Today children are learning to spell those words which they will use in their writing of letters, stories, and reports.

Arithmetic in the early curriculum was an important member of the "triumvirate." Since arithmetic is difficult and exacting, it was considered appropriate for the development of memory and reasoning and could be transferred by the learner to any situation in which these abilities functioned. Content of subject matter was very difficult and many impossible and impractical problems were presented. Today the content of arithmetic taught in elementary grades deals with the ap-

plication of numbers in children's daily experiences and in social situations in and out of school, and with the computational phases that are needed to solve the problems. Today emphasis is being placed on meaning and understanding of numbers. Instruction is paced to the abilities and interests of pupils, thus making it possible for children to succeed.

In the frontier school, emphasis was placed upon the intellectual development of the children which was expected to be achieved by memorizing the content of reading, writing, and arithmetic. Through this process of learning it was believed that the following abilities would be developed: stick-to-it-iveness, observation, industry, patience, transfer of skills and work habits to all phases and types of learning situations and life activities. No provision was made for the development of social amenities. Little or no thought was given to the development of concomitant learnings, attitudes toward one's classmates, attitudes toward school work, standards of neatness, confidence in self, interest in school subjects, appreciation of contributions of other persons.

Today in all but the more backward schools we think not only of the intellectual, but also of the physical, social, and emotional development of the child. Subject matter plays an important role in education; the child has access to many different kinds of books, bulletins, magazines, and newspapers. Causes of emotional blocks and frustrations are removed by adjusting learning situations to the child's interest, maturation, readiness, background; by reducing competition and rivalry in working toward goals; and by avoiding humiliation and fear. The equipment in classrooms, provision for physical examinations, the program for hot lunches indicate the great concern in regard to the child's health. Through play programs, units of work, and situations which involve creative effort the child learns to take his place sometimes as a leader and at other times as a follower in his social group.

The method of study used by the child of the era of *The New England Primer* was memorizing, and the technique used to ascertain if the child had mastered his assignment was that of reciting back to the teacher. The teacher of today knows that only when the child is participating in a purposeful, meaningful manner does he learn most fully and economically. The teacher guides and directs the learning by working with the child and by providing a rich, meaningful environment which will arouse his interest, train him in the application of what he learns, and challenge him to higher levels of learning.

The progress and status of a child in the early school were in terms of the reader which he was studying (first reader, second reader, etc.)

and often he was retained in a grade until the material was mastered. Today the idea of progress is advancement according to each child's growth pattern. In modern schools children remain with their own social age group and work with materials on their level of achievement. At the end of the school year, they move on to the next grade, where they are again grouped according to their needs and begin instruction at the bench mark of a group of children or occasionally of an individual.

Discipline was harsh in the traditional school. The teacher's word was law. He who disobeyed was punished severely and often suffered whipping or the mental punishment of sitting for hours with a dunce cap on his head. Fear, humiliation, and physical punishment were used as a means of motivation for study. The modern teacher understands that children are developing organisms and will manifest behavior tendencies which from time to time are inconsistent. Children learn responsibility for conduct by being treated as honest, sincere individuals who will cooperate if given a chance, and then being given increasing opportunities for exercising decision and self-control. The lazy child, the bully, and the clown are no longer considered wicked individuals who must be disciplined by means of corporal punishment. These children are given guidance in developing interests in the objectives which their social group hopes to achieve. The timid child and the quiet child are no longer thought of as being the "good children," but as children who also need guidance in learning how to take their place, participating and expressing themselves fully in the group.

The Passing of Pioneer Ideas.—The early decades in the twentieth century may be considered as the time when education began to attack the standards of the pioneer schools. The testing movement and the philosophy of Dewey gave great impetus to the movement. Ideas of the traditional school which were, and in many instances still are, under fire are as follows:

1. Failure to appreciate the importance of directing and making effective the out-of-class learning activities of the pupils
2. Wastefulness of daily lesson-hearing class recitation
3. Inadequacy of the standard class method
4. Relative lack of group cooperative activities
5. Failure to correlate instruction around centers of application and interests in a lifelike manner, as in problems and projects
6. Indefiniteness of the conventional assignment and inadequate preparation given pupils for effective study
7. Teacher's inability to measure the pupil's progress accurately and objectively

8. Tendency to focus attention upon words rather than upon ideas and meanings
9. Irrational overemphasis upon multitudinous petty facts, too numerous to learn and for the most part quickly forgotten
10. Untoward effects of harsh, tyrannical, fear-inspiring class methods upon mental balance and the development of personality
11. Lack of visual, auditory, and other concrete materials

Point of View—The New Philosophy of the Denver Public Schools.—The following statement is quoted from a pamphlet issued by the Denver, Colorado, Public Schools.

We believe that the purpose of education for children in the elementary school is to foster, promote, and develop democracy as a way of life. This implies:

Respect for the potentialities of each individual.

Awareness that freedom demands the acceptance of responsibilities.

Obligation of each individual to contribute to the welfare of the groups of which he is a member.

Participation in experiences which will foster social, emotional, intellectual, and physical growth.

The right of each individual to make choices commensurate with his maturity.

Democracy as a way of life is a way of behaving. The development and modification of such behavior are accomplished through helping boys and girls to solve problems meaningful to them and problems imposed upon them by society. Therefore, a program of education must identify such problems. The solution of these problems implies the development of the following kinds of behavior:

Many and varied interests and appreciations which will make for effective and abundant living.

Ability to think clearly and to make choices that are socially constructive.

Habits, skills, and understandings which will enable individuals to meet the problems of living

2. RECENT DEVELOPMENTS

Teaching Principles.—During the past forty years, many changes have taken place in the elementary school. A major force at work was the influence of John Dewey's philosophy, which was an outgrowth or product of (1) Rousseau's principles of growth, pupil-activity, and individualization; (2) Pestalozzi's discipline of sympathy and his principle that learning proceeds from the known to the unknown, and his doctrine of interest; (3) Froebel's idea of learning

to do by doing which depended upon self-principled activities or creative development, which is the basic principle of socialization; and (4) the findings in studies by G. Stanley Hall which stimulated an interest in child nature. Out of these teachings have grown the basic principles of today's teaching, which are:

1. Children learn by doing.
2. Motivation should be intrinsic and natural, not artificial.
3. Learning should be gradual and continuous, not discrete.
4. Instruction should be adapted to individual needs.
5. Natural social settings should constitute learning situations.
6. Learning depends upon the individual child's ability.
7. Learning comes through sense impressions.
8. The child can best be educated as a whole, as a unit organism.
9. Teacher-pupil and inter-pupil relationships should be cooperative.
10. Education means improving the quality of living.

Respect for the Individual.—All the newer trends in teaching which characterize the twentieth century revolution emphasize initiative and responsibility on the pupil's part, the importance of experiencing success rather than failure as a fundamental of mental hygiene, and the healthful development of personality. They respect the self-confidence and intellectual and emotional integrity of the individual. They are also radical realism. "Learning by doing," "all learning through sense impressions," "understanding before memorizing," and many other such expressions, voiced in previous centuries by the fore-runners of the revolt, have become principles of practice as well as of theory today.

Through all the more recent developments in method, one may easily discern the trend toward more friendly, cooperative, sympathetic pupil-teacher relationships. Even in spite of the accretion of millions of pupils from the lower levels of economic status and intellectual ability, discipline has become less and less a crucial problem, a convincing testimonial to the new relationship between instructor and instructed.

Providing Suitable Conditions for the Development and Maintenance of a Sound Personality.—It is becoming more and more generally recognized that school life is of great importance in determining the present and future mental health and strength of personality of the child. It is not only that the school and the teacher may be responsible for damaging the personality of young learners; in the better schools, the growth of healthy, sound personality is one of the more important objectives for the attainment of which the whole of educational materials and methods is adjusted.

In recent years much attention has been given to the fact that an increasing number of persons, both youths and adults, apparently have personality weaknesses or do not enjoy good mental health. It is also now believed that at least one cause of mental illness is the result of unfortunate experiences in school life. Many features of our school organization contribute to a feeling of inadequacy and inferiority on the part of large numbers of children. One example is the attempt to require a child to meet standards of achievement beyond his potentialities or to participate in activities in which at the time he has no interest. A concomitant of this requirement is deprivation of opportunities for success in activities in which the child has a reasonable opportunity to succeed.

Burnham¹ suggests that "every child should get a gauge of his abilities by opportunities for marked success in some activities as well as failures in others." The teacher is responsible for arranging situations in which the child will participate without external compulsion and will have a reasonable chance of success. The teacher should also recognize that she has an obligation to maintain her own mental health.

Recent Developments in Measurements.—Since 1910, great strides have been made in improved methods of measuring the results of learning. Not only do teachers generally employ more objective and more reliable means of measurement, but especially in recent years much more attention has been given to measuring advancement in fields other than general information and subject matter. The superior teacher today understands how to measure growth in attitudes, ideals, interests, and understanding.

Closely related to the improvement of testing is the increased use of controlled experimentation as a means of evaluating techniques. This scientific approach to the problem of judging the merits of proposed procedures has not been as fruitful of definite conclusions as was hoped. Yet it has thrown much light upon the relative efficacy of various plans in contributing to such educational outcomes as can be measured—chiefly information and subject-matter skills. It constitutes a most promising improvement over the prevailing armchair and forensic approach and has already served to bring into serious question the somewhat extravagant claims of the proponents of various new teaching plans or techniques. The development of mental tests and formulation of the concepts of mental age and I.Q. have given tremendous impetus to the provision of better means of dealing with

¹ W. H. Burnham, *The Normal Mind*, p. 211.

NOTE: Complete citations for books mentioned in footnotes will be found in the Selected References.

individual differences. The results of achievement tests take on a greater meaning if they are interpreted on the basis of the child's ability and become an effective means in guiding children in their school work. Other results of the scientific movement are :

1. Developing nonverbal tests
2. Developing performance tests
3. Improving teacher-made tests
4. Evaluating educational aims
5. Evaluating educational materials
6. Developing a relative marking system
7. Studying children scientifically
8. Discovering individual needs of children
9. Discovering effective methods of teaching
10. Discovering readiness for many learnings
11. Discovering interests of children
12. Adjusting the school to the child

Audio-Visual Aids.—The use of visual and auditory aids and other tangible objects has developed beyond the dreams of the teacher of the nineteenth century. In addition to a more widespread use of simple aids such as pictures, maps, slides, natural and manufactured objects illustrating lesson topics, laboratory apparatus, and models, many though not all schools are today employing sound "movies" and radio programs. The revolt from verbalism, breaking forth sporadically since Comenius, has in the last quarter century really overturned the oppressors of understanding, and teachers, in numbers almost large enough to constitute a majority, are really addressing themselves seriously to the task of instruction as opposed to lesson-hearing. Effective teachers in the past have supplemented reading and study with such aids as pictures, natural objects, maps, observations. Technology has given the teacher of today the radio, phonograph, the lantern slide, the sound moving picture, and television.

3. THE MODERN TEACHER'S RESPONSIBILITIES

The great advances which have taken place in the development of the elementary school have not only increased opportunities for the learning and development of children, but they have also increased the responsibilities of teachers who are guiding approximately twenty million children in adjusting themselves to the everchanging world in which they are living.

Directing Learning Activities.—The teacher's most important responsibilities are to plan and direct the activities which will result

in learning. In the modern school the teacher is considered the director of learning. This means that she must conceive, provide, and arrange for motivation, materials, activities, and measures of growth which will insure that the children under her guidance will acquire skills of reading and writing, gain an understanding of numbers, develop abilities to read comprehensively and to communicate intelligently, develop habits of work and proper attitudes. All this is a very complex task as is indicated by the following list of teacher activities in directing learning of children :

1. Learning to know each child
2. Planning, arranging, and evaluating learning materials
3. Choosing methods of teaching in the light of goals to be achieved, needs and abilities of children, and materials on hand
4. Maintaining effective person-to-person relationships
5. Maintaining physical environment conducive to learning
6. Presenting problems
7. Guiding in the solution of problems
8. Evaluating learning
9. Recording progress
10. Keeping parents informed
11. Studying research in order to clarify educational problems

Curriculum Building.—The true curriculum is that which is functioning day by day as children and teachers work or study and play as individuals and in groups. It is the teacher who knows the needs, concerns, and interests of children and understands the home and community forces which are at work. Since the teacher is the key person in knowing what should be in the curriculum and in putting the curriculum into effect, it becomes her responsibility to take part in building the curriculum. Today many schools are making it possible for teachers to participate in curriculum building by diminution of their classroom duties. During the summer, many teachers attend curriculum workshops in order to develop various courses of study under the guidance of experts in various fields of learning, such as reading, arithmetic, social studies, art, handicrafts, music. Approaches employed in curriculum construction by the modern teacher include the following :

1. Develop criteria which can be used in the selection of curriculum materials
2. Provide for continuity in development of the various areas
3. Discover and review interests, needs, capacities of children
4. Study how the home and the community can cooperate with the school in the on-goingness of learning

5. Study the relationship of content and materials from grade to grade

Character Development.—Character is the combination of ideals and habits which determines the personality of an individual. Since habits may result only from *doing* it is imperative that real situations be provided so that children may experience through their own energy those patterns of conduct which are acceptable in a democratic society. The modern teacher is greatly and increasingly concerned about character development in children, about providing experiences in which children have opportunities to render service to others; to be courteous, courageous, cooperative, honest, and kind; to make decisions which are concerned with moral values. Activity units provide many opportunities for children to be courteous, to take turns, to share materials, to be truthful, and to consider the rights of others. During the story hour stories that deal with problems of moral conduct which are easily perceived may be read and told. Biographies of scientists and statesmen offer great possibilities for character education. Children tend to select as ideals individuals in whom is vested that inspiration which helps the child to raise his level of achievement in building proper habits of conduct. If the teacher is sincere and understands the philosophy of the parents of her pupils, planning with the children the celebration of religious occasions may prove to be an inspiring experience for the children.

Guidance.—The modern teacher feels a great responsibility for the guidance of pupils. She helps children understand why they are going to school. She helps children learn how to play and to work together. Many concepts of attitudes are clarified for the children through their experiences and through observations by noting what the teacher does and says. If children are expected to respect the rights of others then teachers must respect the personality of each child.

To render effective guidance the teacher must understand child growth and development. She must understand child society so that patterns of conduct will be evaluated on the level of the child and not on the level of adults. All types of measuring devices have advantages and limitations. Guidance requires skill in assembling records and all information so that proper diagnosis and prognosis can be made. The teacher realizes that through the development of effective habits, attitudes, and appreciations the child will need less and less of her guidance and thus grow into an independent member of society who will understand that for privileges received he also must assume responsibilities.

Diagnosing Difficulties and Evaluating Growth.—The teacher is responsible for adjusting as closely as possible all learning situations to the interests, backgrounds, and maturity of children at all grade levels. She also is responsible for the evaluation of achievement and progress of children, for the diagnosis of their needs, and for organizing remedial procedures. Intelligent use of mental tests, achievement tests, diagnostic tests, plus observation of children at work are very desirable in pacing the work of children, thus eliminating the danger of children's facing learning situations which are beyond their potentialities. By this precautionary device, the careful teacher may avert on one hand the precipitation of personality problems or on the other of having children face situations which do not challenge their power, thus depriving them of experiencing the feeling of having accomplished something worth-while. Diagnostic tests and critical observation are very helpful in locating children's deficiencies and in determining the bench mark at which they are working. A superior teacher is one who assumes the responsibility of being proficient in constructing teacher-made tests in line with the immediate and specific objectives, in preparing remedial materials such as work sheets, and in understanding the value and the methods of commercial materials.

Conducting and Utilizing Research.—The teacher's best chance of knowing what to do with children rests upon her efforts to improve her work constantly by utilizing the techniques of research. The research conducted by teachers, while it may be of a relatively simple nature, has the advantage of being conducted in actual teaching situations. Teachers also have the responsibility of utilizing the findings of careful research work conducted by investigators who have the necessary interest and ability. The superior teacher of today, like the superior physician and the superior dentist, is not only diligent in keeping abreast of research pertaining to her field of work, but she has learned how to evaluate and interpret research critically.

Extraclassroom Responsibilities.—The time devoted to school work cannot be measured by the clock. After the children have been dismissed and during the week end, various kinds of "home work" are necessary for the teacher. Several hours a week are needed for such activities as helping children individually and in groups, making reports, attending special teacher meetings, assisting PTA organizations, working on various committees, such as curriculum, visual aids, and conferences with parents. Classroom activities, such as choruses, bands, and special reports develop into extraclassroom responsibilities

and are a means of taking the school into the community in order to familiarize the community with the work that is being done in school.

Understanding the Community.—The modern teacher realizes that she cannot work effectively in a community if she has only a general idea of the place. In order to understand the culture of its people and to learn about their needs and interests, it is essential that the teacher live in the community during the time that she is employed as a teacher. A teacher who leaves the community every Friday evening and does not return until Monday morning does not have many opportunities to participate in local activities and to make contacts with those agencies which are concerned with the welfare of the children. The superior teacher quickly becomes an integral part of the community in which she teaches.

The child's growth also is influenced by other forces in the community. Attitudes and opinions of children are influenced by their religious background, their economic status, the tensions in the neighborhood, and the organizations which provide out-of-school experiences. In order to understand the aspirations of the children and the customs of the various groups, the teacher must contact those sources which have a great influence upon the lives of the people. Important points of contact are churches, clubs, welfare organizations, and the homes.

The most effective curriculum is based upon the needs and interests of the children and these are determined to a large degree by the community in which the children live. It is essential therefore that the teacher understand the social pattern and life of the community. One section of a city may be a district in which the parents are on relief and its children may be undernourished. Another section may be represented by two nationalities, the children hearing little or no English spoken in the home. Teachers in the first section will be concerned with health problems and teachers in the other section may find it necessary to build an understanding of the English language before she can introduce reading to the children.

The teacher also must assume the responsibility of a citizen. She should understand the form of government of the community, she should know who the city officials are, and she should participate in civic groups. By participating in community activities, the teacher will have an opportunity to assist in explaining the work of her school to the community, to take her school into the community, and to let the public know what is needed in the school in order to have the best institution possible for their children. Through an understanding of

the problems in a community the teacher will be able to present community needs to the children in a realistic way which in turn should vitalize the curriculum.

4. DEMOCRACY IN A COMPLICATED WORLD

The goal of education in a democracy is to produce democratic individuals. A democratic individual respects the rights of others, is worthy of being respected, realizes that in a cooperative society we must give as well as receive, and that the value of an individual is determined by contributions made to the group for the good of the whole. He also appreciates the fact that in a democracy he has the right of making his own decisions and both the right and the responsibility of participating in group decisions. Therefore, for an elementary school to be an effective institution in a democracy, it is essential that the teachers understand the nature and problems of a democratic society, recognize and assume the responsibility of guiding children in the development of those skills which will enable them to solve their problems with confidence, to discover and for the good of society to develop their full potentialities even in the least promising of those whom they teach.

Teaching for World Peace and Understanding.—In recent years development of the means of human destruction has been so rapidly accelerated that there are only two alternatives—world suicide or mutual understanding among the peoples of the world. International treaties, agreements, and charters are of no greater force than the understanding and will of the peoples who are parties to the signed document.

Today the elementary teacher's greatest responsibility is to teach so as to preserve our democracy. This means that our children must be trained in the ways of peace. In developing an understanding of a world at peace, we must begin in the primary grades to develop an understanding and an appreciation of all the different peoples and their cultures, and their interdependence. Interracial and intercultural relations in our own communities can be made significant by talking, playing, and working with persons representative of these groups. A social consciousness can be developed by helping children realize that they must live peacefully in groups, that they must learn to take their turns, and that their needs are no more important than the needs of other children. By the time children leave elementary grades they should understand that the people in a wider community, or the world, are almost as interdependent economically and politically as the people

in the smaller communities, and that, in order to survive, cooperation of all peoples is needed. At this age, children also should understand the shrinking of world distances and have some comprehension of its international, economic, and political implications.

It is clear that, whatever men in uniform protect us from in war, teachers in the classroom lay the basis for protecting all of us from more devastation than is possible for most of us to imagine. International treaties are but scraps of paper and armaments but inadequate antidotes unless they rest on the basis of mutual understanding and tolerance between peoples.

5. THE MODERN ELEMENTARY SCHOOL TEACHER

The Teacher's Responsibility to Herself.—Teaching today is a complex task. Teachers are human and therefore have personality needs which must be met if they are to function as integrated, well-adjusted personalities. Every teacher must face the problem of emotional security and should find it within a circle of adult friends. A teacher also needs to meet success and should derive a great satisfaction in the job which she is doing. It is her responsibility to prepare herself for her job, and to continue growing in the skills and knowledges essential to her job, so that year by year she will achieve greater and greater success. Emotional outlets outside teaching should be sought through hobbies and leisure-time activities, such as music, reading, painting, needlework, gardening, and community participation.

The need for social approval will be met when a teacher receives recognition by the community for services rendered in the school and in the community. The teacher can help to win this recognition by making herself an authority on a specific phase of school-work or by a hobby. It is every teacher's responsibility to study her own needs, to meet them intelligently, and thus to avoid those frustrations which are causes of a disintegrated personality.

The Elementary Teacher of Today.—The elementary teacher of today is an important person. She is no longer an impractical school-room creature insulated from the world of practical affairs. Upon her rests the success or failure of the world's greatest political and economic experiment—democracy. Upon her and her work depend the peace and welfare of the world.

Her responsibilities have broadened in scope. She guides and stimulates learning by working with children. She is a member of the community, a liaison unit between community, parents, and school.

The characteristics of superior teachers of today are well indicated by the following quotations from the late Glenn Frank, former teacher, author, lecturer, university president.

THE TEACHER'S TASK ²

"Rabbi," said Nicodemus to Jesus, when he paid his now famous night visit to the Galilean prophet, "We know that thou art a teacher come from God."

As the president of a university in which approximately 1,000 men and women bear the name of teacher, I am interested in this reference to Jesus as a teacher.

If Jesus was a teacher extraordinary, as has been said so many times, what were the essentials of his teaching genius?—

He was not interested in giving his hearers new information. He was interested in giving them a new way of looking at all information, old and new.

He was not interested in having his hearers absorb a mass of standardized information, but in having them think about the pressing problems of their own lives.

He was not interested in increasing their knowledge. He was interested in increasing their understanding.

He was not concerned to have them practice in remembering. He wanted them to practice thinking.

THE TEACHER'S PRAYER

O Lord of Learning and of Learners, we are at best but blunderers in this godlike business of teaching.

Our shortcomings shame us, for we are not alone in paying the penalty for them; they have a sorry immortality in the normal minds of those whom we, in our blundering, misled.

We have been content to be merchants of dead yesterdays when we should have been guides into unborn tomorrows

We have put conformity to old customs above curiosity about new ideas.

We have thought more about our subjects than our object

We have been peddlers of petty accuracies, when we should have been priests and prophets of abundant living.

We have schooled our students to be clever competitors in the world as it is, when we should have been helping them to become creative cooperators in the making of the world as it ought to be.

We have regarded our schools as training camps for existing society to the exclusion of making them working models for an evolving society.

We have counted knowledge more precious than wisdom.

We have tried to teach our students what to think instead of how to think.

We have thought it our business to furnish the minds of our students when we should have been laboring to free their minds.

² *The New York Times*, July 10, 1929.

And we confess that we have fallen into these sins of the schoolroom because it was the easiest way. It has been easier to tell our students about the motionless past that we can learn once for all than to join with them in trying to understand the moving present that must be studied afresh each morning. From these sins of sloth may we be freed.

May we realize that it is important to know the past only that we may live in the present.

Help us to be more interested in stimulating the building of modern cathedrals than in retailing to students the glories of ancient temples.

Give us to see that a student's memory should be a tool as well as a treasure chest.

Help us to say "do" oftener than we say "don't."

May we so awaken interest that discipline will be less and less necessary. Help us to realize that, in the deepest sense, we cannot teach anybody anything; that the best we can do is to help him learn for himself.

Give us a reverence for our materials, that we may master the fruits of our particular fields, but help us to see that all facts are dead until they are related to the rest of knowledge and to the rest of life.

Help us to see that education is, after all, but the adventure of trying to make ourselves at home in the modern world.

May we be shepherds of the Spirit as well as the masters of the mind.

Give us, O Lord of Teachers, a sense of divinity of our undertaking. Amen.

Teaching today is a calling of great importance—a calling for persons of unusual abilities. It offers an opportunity and challenge to service far greater than other callings do. Paid three to four times the salary of her predecessor of 1900 and far better trained, the teacher of today can be, if she will be, one of the most highly respected individuals in her community. She can live a life of great service to those she trains for life as well as to her nation and to the world.

To meet effectively her responsibilities in the rapidly changing world today, the teacher must be an ever-growing, ever-adapting person. Credits, degrees, and academic honors do not assure adequate education even when awarded, and rapidly become obsolete. As President Sproul of the University of California so aptly said:

Nothing has handicapped the American educational plan more than the tendency of American citizens to think of schooling as a kind of vaccination against ignorance, and to consider that a concentrated dose of it in youth makes one immune for a lifetime. Actually, the immunity lasts only a few years, and unless it is renewed by periodic inoculations in study and thinking, one falls victim to a chronic type of ignorance which is often more dangerous than the acute form, because the patient, incompetent to recognize the symptoms, doesn't know he has the disease. We meet such chronic sufferers from

ignorance everywhere. They look all right on the outside. . . . But inside, their minds are suffering from atrophy. Instead of thinking through problems in the light of all available facts, they merely supply a pattern of opinions based on facts that went out of date along with their yellowing diplomas, and liberally garnished with prejudices that have accumulated in their minds like broken furniture in an attic.

QUESTIONS, PROBLEMS, AND EXERCISES

1. Explain and give examples of learning by doing.
2. Be prepared to give a five-minute talk on "The most important purpose of elementary schools."
3. Be prepared to give a five-minute summary of "The new teaching versus the old."
4. List traditional practices which exist in present day elementary schools.
5. Be prepared to give reasons for changes in elementary schools.
6. Be prepared to give a five-minute talk on "The opportunities of teachers to do important things."
7. Prepare a ten-minute talk on "The ways in which your local community is providing for the needs of its children."
8. Be prepared to discuss characteristics of a good elementary teacher in terms of a "World at peace."
9. Be able to explain clearly each of the ten modern principles of teaching.

Chapter 2

THE ELEMENTARY SCHOOL PUPIL

1. THE ELEMENTARY SCHOOL AGE

Childhood, a Period of Growth and Development.—By the time the child has arrived at about the age of six, it is very obvious that he has made great advances physically and mentally. He has grown from infancy, a period of almost complete dependency in meeting his own needs, to a period in his development when he is making an entry into a world in which he eventually must be an individual who can make his own decisions and solve his own problems. It is at this time that it becomes imperative that there may be available to him a richer environment with broader experience more appropriate to serve interests which he is beginning to display and newer types of activities in which he is beginning to engage. The institution which has been set up by society to do this tremendous task of guiding children through the transitional period between babyhood and adolescence is the school.

Those who are responsible for the guidance of children at this level should have an understanding of child growth and development so that the activities which they plan for the children will meet the needs, interests, and abilities of each individual. As children grow from infancy to childhood and to adolescence many physical, mental, social, and emotional changes occur. Research reports on child growth and development are not conclusive but point toward the following generalizations :

1. Learning is experiencing.
2. Growth within the individual is continuous.
3. Growth is the result of interaction of nature and nurture.
4. The various component traits—mental, physical, social, and emotional—develop at different rates and each learner possesses his own unique pattern of growth.
5. The learner varies not only within himself in the development of these various traits, but differs to a greater or lesser degree from established norms.
6. Emotional reactions often are influenced by motor development.

7. Mental and physical reactions may be influenced by emotional behavior.
8. Instruction beyond the child's maturity will not result in permanent learnings

It is not possible to state definitely the month or year when specific changes take place, but many changes in general type of behavior are discernible at various levels according to months and years. Typical changes during childhood and preadolescence will be presented here, but the teacher should avail herself of extended information pertaining to the group which she is teaching by consulting authentic sources in the field of child growth and development.

Physical Changes.—During early childhood, the age from six to eight years, children are beginning to be independent. They are able to dress themselves, tie their shoelaces, get their toys, and climb the jungle gym. The large muscles of the legs, arms, and hands are more developed than the smaller muscles. The heart is growing rapidly and if it is not protected from excessively strenuous activities, particularly when the child is convalescing, it may be seriously impaired. Growth in height is much slower than during infancy. Right- or left-handedness has been established and should not be changed. The loss of teeth is an exciting experience for many children. At this age children are very active. They jump, run, shout, and even if they do try to sit still, it is almost impossible for them to control their movements.

It is not possible to present in detail a pattern of development for children who are ten or eleven years old. The variation between boys and girls is great. Most girls enter puberty sometime between ten and eleven years of age and the majority of boys at about thirteen or fourteen. Since girls mature earlier than boys, they often are taller and heavier at this age than the boys. Frequently a girl may gain as much as fifteen pounds in a year. Sex characteristics in the girls make their appearance and often cause them to become very self-conscious. This rapid growth and change are very fatiguing and children often complain of being tired. Big hands and big feet are the causes of many awkward movements. In some cases smaller muscles have developed to such an extent that muscular coordination is good.

Intellectual Growth.—The desire to learn is very evident in six-year old children. They are bubbling over with questions and often appear to be destructive in their attempts to find answers to their "Whys." The manner in which these questions are answered and the

type of experiences provided to clarify concepts are great determining factors in keeping this eagerness to learn alive during their school career.

At the age of six or earlier most children can carry on a conversation and absorb many ideas through discussions; by seven they have learned to advance reasons to support their statements. It has been estimated that the average vocabulary of six- and seven-year-old children is at least four thousand words; the increase is approximately seven hundred words a year; therefore, the average child at the age of twelve is in possession of about seventy-five hundred words. Recently it has been claimed that these estimates are very conservative and that children become familiar with at least a thousand words a year and that an average first grader possesses a vocabulary much greater than we usually accredit to him. Scientific evidence bears out the fact that with a mental age of six and a half years the child is intellectually mature enough to read the primers of today.

With a minimum mental age of six and a half years, more than three out of four children will master 80 per cent of the addition facts with sums under ten. By the time children have completed the intermediate grades, they understand that the Three R's function as tools in solving problems, in seeking information, and in satisfying social experiences. They are able to understand many of the relationships of cause and effect in the physical universe, in economics as it functions in their life, and in their own acts and experiences. They are interested in improving various abilities and skills which are needed in acquiring information. They have an understanding of time which is beginning to function in the planning of their work and of leisure time activities, and of time which centers around the calendar and is fixed by dates that function in the social studies and in the study of world problems.

No child should be introduced to the program of learning to read, to write, or to do number work before he is ready for it—and not all children in a grade will be ready at the same time. Emphasis should not be placed on academic achievement, but on progress in learning. Tensions and failures at this age affect the child's attitudes toward learning and the school situation and often condition him for his school career in the future.

Social Development.—During this period the child is changing rapidly from an individualistic dependent being to an independent socialized individual. Social characteristics during the years of six to eight take the form of rivalry, keeping up with their playmates, playing with other children, creating noise and excitement, sensitivity to

the reactions of others to his behavior patterns, and inability to distinguish between the real and the imaginative.

In spontaneous play children's interests vary according to sex. Boys are interested in being "cops" and Indians; the girls in dressing up in mother's high-heeled shoes and in playing house. Whenever boys and girls mix in play (as in playing house) there is an awareness of sex—the boys take the role of fathers who go out to work and the girls that of mothers who remain in the playhouse to take care of the baby or to prepare the dinner.

The age level from nine to twelve years is thought of as the "gang age." This is the time when the desire to find a place in a larger world is strong. Friendships include those of the same sex. Girls tend to dislike the boys and the boys the girls. They will cooperate with their own group but are not inclined to cooperate with adults or to seek and accept their advice and guidance. The child at this age is willing to pay any price in order not to lose face with his peers. As they approach puberty they begin to lose interest in many of the activities of the gang, such as codes or signals, and begin to form another group; this to the immature members of the original group appears to be an act of disloyalty and leads to many misunderstandings and trouble. Frequently affection is shifted from their peers to an older person. The consciousness of person-to-person relationships is increasing and probably older pupils in the sixth grade would be happier if placed in junior high school.

Emotional Development.—Children between six and twelve years of age are subject to many emotional stresses and strains. As their interests and concerns expand their emotional patterns increase and the ability to control these emotions should become stronger. The six-year-old child, who in many ways is still a baby and often less decisive and less cooperative than a five-year-old, wishes to grow up and at the same time feels the need of depending upon adults. Because of a lack of muscular coordination much help is needed. Encouragement and praise are very valuable at this age.

The children who are entering preadolescence experience many emotional changes. They are overcritical of adults. They expect help from others and at the same time frequently resent it when it is given. Their moods are very changeable. In school they may conceal their feelings while at home they may be very disagreeable, or vice versa. They need guidance and a home that will give them a feeling of security.

Each Child Is Unique.—No two children are alike. On the basis of their past experiences in many and varied situations and also on their own level of aspiration, each child interprets new experiences and accepts what he wishes to learn in solving his problems. Therefore, different children do not react in the same way to identical situations. There is no single type of reactions. There are many types of extroverts and many types of introverts and each individual type should be respected. Children may need guidance in the development of their personalities, but not too much or too sudden that pressure should be exerted to convert introverts into extroverts.

A group of children of the same mental age and same I.Q. vary from each other in very important traits, abilities, and background more than a group of seven-year-olds vary from a group of eight-year-olds. A fifth grade working on long multiplication varies in mastery of multiplication facts, in the ability to add by endings, and in speed of working and exercises. In a first grade reading group the variation from individual to individual is great in number of sight words acquired, number of concepts understood by each child, ability to blend sounds and syllables. Not only is there a variation within the group, but children are unique within themselves.

Studies show that the I.Q. is not a constant factor. As children grow older the I.Q. becomes more constant. Great care should be exercised in attempting to ascertain the I.Q. of children and the score obtained on a first grade test should not be considered as a reliable measure of brightness throughout a child's attendance in the elementary grades.

Individuals vary also in academic achievements and in abilities that function in studying the various subjects. A child in the fourth grade on an achievement test may rate third grade in arithmetic, fifth grade in reading, second grade in spelling. The same individual in reading may rate seventh grade in vocabulary, fourth grade in comprehension and in arithmetic, fifth grade in fundamental knowledge, sixth grade in fundamental operations, and fourth grade in problem solving.

The ability to concentrate also varies within the individual. Growth is not always steady. There may be a period of weeks in which the child does not make any progress. A child may develop rapidly socially and may be immature physically and emotionally while another child will develop at an even tempo.

Since each child is an individual and varies within himself, it does not mean that each one should be taught as an individual. Groups should be organized on the basis of typical needs. Children should not be assigned to one specific group, but should be permitted to move

from group to group depending upon their needs, which means that the personnel of groups will be changing constantly. Persons responsible for the planning of instructional programs must be sensitized to the needs of children and to the uniqueness of each child.

2. NEEDS OF CHILDREN

Socialization.—During the period of childhood the major concern of the child is to find his place in a world that reaches beyond the confines of his home and at the same time to feel secure in his own home. In this great experience of becoming a member of a larger social group the child will face many situations, some of which will be pleasant and others disagreeable; some accompanied by success and others by failures and frustrations. In this process of socialization the child must acquire the patterns of the culture of the society in which he is living and in order to participate in the group often must develop inhibitions.

Basic needs for this period of socialization are situations which are stable, guidance personnel (parents, teachers) who are tolerant, patient, have integrated personalities, and who also can see the world through the eyes of the child. Stable situations provide the security and affection needed for growth in establishing the child's status with other persons. Often situations make for an insecurity which is very frustrating and disturbing. The emotional climate in many homes is one of fear, resentment, shame, and anxiety. Children are very sensitive and react sharply in either a positive or a negative manner to implications of religious conflicts, divorce, death in the family, sibling rivalries, economic conditions, and social status. Inconsistency in the disciplining of children because of extreme moods is one of the greatest of limiting factors. Effective characteristics of guidance personnel are (1) to have standards of conduct which can be met by children at various levels of development, (2) to be able to meet the child with an affectionate, pleasant firmness, (3) to be consistent, (4) to respect the child as a person.

In becoming a member of a group, the child needs to have an assured position. What he thinks of himself in relationship to others in the group and to standards set up by the group is very important. A great motivating factor is group conformity. Membership in clubs will help fill this need of belongingness and also will provide for the development of leadership and followership. To be a member of an organized team, a club, or a school band affords opportunities for children to gain self-confidence.

Physical Growth.—Childhood also is a period of rapid physical growth. Growing children need food, activity, and rest. Many children, and not only those from underprivileged homes, are undernourished. This need has become so obvious that many schools with the aid of the Federal Government are providing hot lunches at noon at a very low cost. Active children need at least ten hours of sleep in order to prevent the overfatigue taxing to the heart. In order to develop body control and strength children need to play games that involve running, catching, jumping, and throwing. All this requires outdoor space which is being provided in many places by the community and the school.

Contact with Reality.—In regard to the need for contact with reality D. A. Prescott ¹ states,

The only basis that an individual has for developing attitudes and formulating behavior patterns is experience. Then, if experience be only partial, restricted, and biased, the resulting behavior patterns must necessarily be inadequate to meet all aspects of life. The implication is that children need to be supplied with experiences as rich and varied as their environments can afford. These experiences must bring them into contact with the realities of matter and energy and with the interrelationships involved therein. They must reveal to children the real nature of the social forces, social institutions, and social processes now in operation in our own and other cultures. They must assure the contact of children with authority in its different forms. In terms of affect, the implication is that children should have a chance to experience success and disappointment, antagonisms and cooperation, pain, and exhilarating pleasure, hard work, the relationship between effort and return, adulation, accidents. In short, children need to run the gamut of experience, excepting only that which produces physical deterioration or disorganizing emotion. Children need contact with reality so that they may grow in knowledge, understanding, and wisdom.

3. CHANGES IN SOCIETY AFFECTING ELEMENTARY SCHOOL CHILDREN

Present-Day Instruction.—If a Rip Van Winkle who had slept a generation or two were to return to the United States today, the most bewildering thing in the American home would be the presence of electric lights, labor-saving machines, and the radio. He might be enamored of "movies." The school child of 1900, or even of 1919, lived a fairly prosaic life. The teacher of today has to compete constantly with attractive opportunities for entertainment. She has to

¹ D. A. Prescott, *Emotion and the Educative Process*, Washington, D. C.: American Council on Education, 1938, p. 119.

compete for the time and attention of children in and out of school hours with agencies which serve to make study in school seem relatively unattractive.

Difference in Home Environment.—The fact cannot be ignored that school experiences constitute only a part of the experiences which determine the nature of the growth of the child and his future behavior. To be most effective, school experiences must be planned and directed with knowledge of the learner's *other* current experiences, particularly those connected with the learner's home and family. These include such things as opportunity to study, availability of reference materials, and the educational, moral, and intellectual equipment of parents and older brothers and sisters.

The "other half" comes largely from homes of lower-paid vocational occupations and lower economic status. The families do not possess a high degree of social prestige and are, therefore, more modest in their cultural objectives and usually in educational plans for their children. Less educated parents are inclined to rationalize and to underestimate the importance of books and formal education. The child from this type of home does not live much of his life in an intellectual atmosphere and therefore does not have the opportunity to see at home the part that an educated mind plays in the lives of adults. Intellectual interests are likely to be neither generated nor nourished in the conversations of the family and relatives. The family radio is not frequently tuned in to broadcasts of cultural programs.

In the homes of a century ago, the spirit of light entertainment was overshadowed by stern virtues of industry and serious mindedness. Adults put amusement aside after children arrived and cultivated the spirit of work. However unattractive those homes were, they built a disciplinary basis for study of things not in themselves thrilling or amusing.

Changes in Agencies of Character Education and Discipline.—Another significant change which gives direction to the effort of the teacher today is the relative ineffectiveness of the church and the abdication of the home in the area of character education, to say nothing of the degree to which standards of morals and social behaviors among adults have changed. Evidence is abundant that church goes today, both regular and occasional, are not greatly concerned about problems of relatively soft and loose living. Divorce rates have increased a great deal in recent decades. Parents devote much time and energy to playing, dancing, and social amusement. Personal appearance has be-

come one of the nation's greatest sources of business. All this means that children grow up in an atmosphere of greatly relaxed and lowered social and moral standards.

Children spend much less time working with their parents and much more in the company of those of their own age, seeking revelry and entertainment. All this is very pleasant and only "sourpusses" would wish to deprive children and older persons of their fun in life. Yet it cannot be denied that these changed conditions mean that the opportunities for effective character education are not as numerous as formerly and that, unless moral character is to suffer a decline, compensating influences must be set in motion, particularly in the school.

To add to these losses being sustained in this area, there has been the growing tendency of parents, with fewer children and with less necessity for their children's assistance in work around the home and farm, to gravitate toward a policy of "appeasement" which indicates much more concern for obtaining the good will of the children than for educating them. This in many families has descended to the level of a demoralizing competition between mother and father, each seeking to appear more favorably in the eyes of the child than the other.

Parents in large numbers, which threaten to approach totality, seem to wish to leave to the school the problems of discipline and character education. Some adaptation of teaching methods is necessary with children who come from homes where the new parental order is in existence. The old-fashioned methods constitute too great a contrast. They result in child resentment, which not only weakens the influence of the teacher but becomes a source of complaint by the parent.

Differences in Discipline.—Children of today are being reared differently with respect to the matter of responding to the authority of their parents and teachers. Formerly obedience was considered as an essential virtue in children. Today conformity is more the result of reason, negotiation, and compromise. Perhaps the newer way is better, but the change calls for a change in educational procedure on the part of teachers. Where authoritative methods are employed in school, there is today the necessity to retain the attention of the learner. Because of this and other significant changes that have taken place, many former teachers who, after a dozen or more years of absence from the classroom, are returning to teaching during the teacher shortage resulting from increased enrollment are confused and amazed by the relative ineffectiveness of methods which had been at least reasonably successful a decade or so before.

Another challenge to the teacher is the change in public opinion

relating to the use of traditional and coercive measures. Corporal punishment, a major source of motivation a century ago, has fortunately passed from the educational scene. It may be hoped that its twin—mental torture—will soon be recognized for its capacity to produce as much pain and more permanent damage. The passing of these twin relics of barbarism, however, forces the teacher to seek other and better means of motivation.

Lessened Opportunities for Discipline of Work Experience.—

Another change in the lives and educational environment of children that recent decades have brought is the decreased opportunity for children to profit by participation in immediately useful work experiences with their parents. The values derived by assisting parents in the purposeful and necessary activities of the home, farm, and community were the development of ideals, attitudes, and habits of industry and responsibility. As John Dewey a half-century ago, A. J. Inglis thirty years ago, and others more often in recent years have pointed out, the value of that participation was far greater than most persons realize.

Present-Day Culture Tensions.—Our present-day American culture has made life easier and less fearful for children, but it also has produced tensions and anxieties which were unknown to pioneer boys and girls. The atom bomb and the possibility of biological warfare have created an atmosphere in which every individual has a feeling of insecurity, and the domination of the world by two powers, the United States and Russia, adds to the tension. Children are very sensitive individuals. They react to tensions within the home, the community, the nation, and the world. Many children are anxious, confused, and nervous because of disturbing and threatening conditions which they and their parents face and experience. It is true that children must experience some anxieties and aggressions, but an overstimulation of any kind, be it mental or physical, has its ill effects.

Family Life.—The contrast of family life in pioneer days with today is great. Pioneer families had a feeling of security and stability in their homes; they did not move about, children and parents contributed to the welfare of the family, and all members worked and played together. Every individual knew that he was needed, that he belonged and was appreciated. Today many children do not know what it means to be in one place more than one year. Some live in confined apartments, others in trailers. Electric lights, canned goods, factory-made clothing, commercial toys, central heating systems have

freed the child of today from many duties and educational opportunities.

Of this situation John Dewey said:

Back of the factory system lies the household and neighborhood system. Those of us who are here today need to go back only one, two, or at most three generations, to find a time when the household was practically the center in which were carried on all the typical forms of industrial occupation. The clothing worn was for the most part not only made in the house, but the members of the household were usually familiar with the shearing of the sheep, the carding and spinning of the wool, and the plying of the loom. Instead of pressing a button and flooding the house with electric light, the whole process of getting illumination was followed in its toilsome length, from the killing of the animal and the trying of fat, to the making of wicks and dipping of candles. The supply of flour, of lumber, of foods, of building materials, of household furniture, even of metal ware, of nails, hinges, hammers, etc., was in the immediate neighborhood, in shops which were constantly open to inspection and often centers of neighborhood congregation. The entire industrial process stood revealed, from the production on the farm of raw materials, till the finished article was actually put to use. Not only this but practically every member of the household had his own share in the work. The children, as they gained in strength and capacity, were gradually initiated into the mysteries of the several processes. It was a matter of immediate concern, even to the point of actual participation.

We cannot overlook the factors of discipline and of character-building involved in this: training in habits of order and industry, and in the idea of responsibility, of obligation to do something, to produce something, in the world. There was always something which really needed to be done, and a real necessity that each member of the household should do his own part faithfully and in cooperation with others. Personalities which became effective in action were bred and tested in the medium of action. Again, we cannot overlook the importance for educational purposes of the close and intimate acquaintance got with nature at first hand, with real things and materials, with the actual processes of their manipulation, and the knowledge of their social necessities and uses. In all this there was continual training of observation, of ingenuity, constructive imagination, of logical thought, and of the sense of reality acquired through first-hand contact with actualities. The educative force of the domestic spinning and weaving, of the saw-mill, the grist-mill, the cooper shop, and the blacksmith forge, were continuously operative.²

Technology has removed the need for the families to supply their recreation through their own creative efforts. Much of their leisure time is spent passively in being a spectator at the movies or in listening

² *The School and Society*, pp. 22-24. Quoted with the permission of the University of Chicago Press, publishers

to the radio. The child of today often is at a loss to know what to do when he is left to his own resources. Families are smaller than a generation ago and more attention is being focused upon the child. Parents are fearful for their child. They desire that he should be efficient in many things and often set standards of accomplishment far beyond his ability, which ultimately results in tensions and frustrations. Many families are not happy units—conflicts exist between parents which lead to separation or divorce. Since childhood is a very unstable period in the development of the child, unhappy homes intensify fears and doubts which normally should be eased at this time.

4. ENVIRONMENT OF A TECHNOLOGICAL AGE

During the past fifteen years inventions have been introduced into our everyday life that were not dreamed of fifty years ago. Undoubtedly during the next fifteen years we shall see many of today's conveniences displaced by more effective and efficient devices. The child of today accepts all these and looks for something more stimulating and more exciting. His leisure-time interests are found in reading the comics, listening to the radio, and attending the moving picture theater.

Radio.—Today the child enters school with a background of information, appreciations, and attitudes that have been influenced not only by his home, but also by forces outside his home. The infant hears not only the voices of those who provide for his needs, but also the voices of individuals who are thousands of miles away. Since the young child is growing so rapidly and is very impressionistic, it is the responsibility of parents to use the radio wisely. Good judgment on the part of parents in the selection of programs can develop early in children an appreciation for good entertainment over the air.

The interest of elementary school children in radio programs, good and bad, is very intense. The six-year old child has developed the habit of listening to an unseen speaker and identifying himself as a member of an unseen audience. Children also have conditioned themselves to such a degree that they can lend one ear to the radio and at the same time engage in another activity. It is not unusual to see children reading and preparing school assignments to the accompaniment of a musical number.

The radio is a powerful instrument in arousing and indeed in educating the emotions of a listener. Scientific investigation by DeBoer ^a

^a John J. DeBoer, "Radio and Children's Emotions," *School and Society*, Vol. 50, pp. 369-373

and Preston ⁴ show that if radio characters are anxious, fearful, and suffering the children will live through those experiences vicariously and as a result will be disturbed emotionally to such an extent that they will become nervous, and their sleep and eating will be disturbed. DeBoer ⁵ also states that the emotional effect may be good since listening to the radio may be a means of relaxation and a source for the release of tensions. Children enjoy relaxation through excitement and laughter. Factors in radio programs that appeal to children are action, suspense, humor, and mischievous pranks.

Since children listen approximately eighteen hours a week to the radio, it is the responsibility of teachers and parents to guide them in learning to discriminate by listening to the good and to the poor programs, and also to learn to evaluate the program on the basis of the objective: is the program being broadcast for advertising purposes, instruction, entertainment, or propaganda?

Motion Picture Theater.—The majority of movies which are shown today are not made for children. Western pictures, serials, feature pictures even though they are good for children are intended for adults. Many investigations have been based upon various phases of the motion picture. The Payne Fund Studies ⁶ have been the most extensive. Important conclusions from these studies are:

1. Children accept what they see in movies as being authentic.
2. Children understand and remember much that they see and hear in movies.
3. Effects of moving pictures upon children who attended frequently:
 - a. Did poorer work in school.
 - b. Had less self-control.
 - c. Were not as cooperative as average children.
 - d. Sleep was disturbed.
 - e. Showed positive correlation between attendance at movie and delinquency.
 - f. Showed nervousness caused by eye strain.
 - g. Six- to twelve-year-old children were influenced by conflict, danger, and tragedy.
 - h. Twelve- to eighteen-year-old children were influenced by romance.
 - i. Adolescent children reacted to love scenes twice as much as adults.

⁴ Mary I. Preston, "Children's Reactions to Movie Horrors and Radio Crime," *Journal of Pediatrics*, Vol. 19, (Aug., 1941), pp. 147-168

⁵ John J. DeBoer, "Radio and English Teaching," pp. 37-38.

⁶ See Payne Fund Studies, The Macmillan Company.

- j. Younger children reacted to humorous pictures much more than adults.
4. Majority of pictures were based upon crime, love, and sex.
5. Pictures for children were negligible in number.

Though they constitute a very small minority of movies, there are today shown in many of the larger communities musical plays, historical pageants, classics, comedy, and travel films suitable for children. Since children are receptive to suggestions from parents and teachers, we should guide them in their attendance at the movies and in the selection of good pictures. Lists of movies that have been graded according to interests and to age of children are published in many magazines, such as *Parent's Magazine*. Upon request *Children's Film Library* will send used films for children to any organization for week-end showings at reduced rates.

The problem with which we should be concerned is that so many children are attending the movies and that they remain frequently for the entire morning, afternoon, or evening. Observations have been made that children carry a lunch and sit through a Saturday afternoon and evening showing of pictures. This practice is not desirable as it keeps the children indoors and in the dark for hours and deprives them of activity, fresh air, and sunshine.

Television.—The advent of television makes available another potentially powerful instrument of education. Since research reveals that the emotional effect of the radio and of the movie is for good and for bad, it may be assumed that the effect of the combination of sight and sound will be more intensive than for either instrument used by itself. Vicarious experiences will be more realistic and understandings will be clearer. By means of television children are able today to observe good and bad behavior patterns of individuals in varying situations; they will see workmen on the job; they will visit museums with a group of children. By means of television children will gain a better understanding of their own culture and of the culture of other peoples.

Television problems with school-age children will be greater than the radio problems. It will not be possible for the children to study and to watch the screen at the same time; neither will it be possible for them to do their duties in the home and at the same time follow a football game. This activity will require wise budgeting of time and also guidance in the choice of program.

"Comics".—Like the radio and the movies, comics have a great appeal for children. Comic books, comic strips in newspapers, and

comic magazines are in great demand today and are being read by approximately 95 per cent of all children. Children regularly read, on an average, four comic magazines, the most popular magazines being *Superman* and *Batman*. Children enjoy *Little Orphan Annie* as for them the characters are of an identifiable type.

Educators and parents have been concerned with the problem of the reading of these picture strips and books by children and as a result investigations have been based upon various problems pertaining to content of comics and children's interests in comics. Thorndike⁷ studied the vocabularies of four popular comic books and found that:

1. Each book contained approximately 10,000 words of reading matter.
2. Each book contained 1,000 different words other than those falling in the commonest 1,000 words of Thorndike word list.
3. Four books contained together 3,000 different words other than those in the first 1,000 Thorndike list.
4. The majority of words used were words that children will use as they expand their reading vocabulary.
5. Reading difficulty was at fifth and sixth grade level

The features of the comics which attract children are mystery, excitement, activity, ability to master difficulties, realism, and the feeling of security, for they know that they will turn out (as the fairy tales) just right.

Possibly the fears of adults pertaining to the reading of comics are not completely justified. Nevertheless, there is growing conviction that children would be better off if they avoided the topics dealing with violence and abnormal beings. Children who do not have access to good reading materials in their homes and in school and who depend upon the comics for their leisure time reading may as a result do poorly in the language arts. Perhaps the greatest danger of reading comics lies in the excessive emotional stimulation, their emphasis upon sex and violence, and the tendency to dissatisfy young people with normal life activity.

Technology is bringing to the life of the child an excessive degree of passivity which does not foster cooperation and creativity. If these values are to be preserved then the child's life should be characterized by active adaptation to various activities and to people. Schools, parents, communities must assume the responsibility of providing experiences that will offset passive adaptations which they are develop-

⁷ R. L. Thorndike, "Words and Comics," *Journal of Experimental Education*, December 1941, Vols. 9, 10, pp. 110-113.

ing during their leisure time. Experiences which provide opportunities for learning from real life, for cooperation, for making choices, and for providing for their own and for others' leisure time through creative efforts are children's theaters, camps, scouting clubs, and other community projects. Through these experiences human values are preserved, a deeper appreciation of the worth of each individual is developed, and character is built.

*The Children's Charter*⁸ sets forth those safeguards needed to protect the right of childhood:

THE CHILDREN'S CHARTER I

President Hoover's White House Conference on Child Health and Protection, recognizing the rights of the child as the first rights of citizenship, pledges itself to these aims for the Children of America.

I. For every child spiritual and moral training to help him to stand firm under the pressure of life.

II. For every child understanding and the guarding of his personality as his most precious right.

III. For every child a home and that love and security which a home provides; and for that child who must receive foster care, the nearest substitute for his own home.

IV. For every child full preparation for his birth, his mother receiving prenatal, natal, and postnatal care; and the establishment of such protective measures as will make childbearing safer.

V. For every child health protection from birth through adolescence, including: periodical health examinations and, where needed, care of specialists and hospital treatment; regular dental examinations and care of the teeth, protective and preventive measures against communicable diseases; the insuring of pure food, pure milk, and pure water.

VI. For every child from birth through adolescence, promotion of health, including health instruction and a health program, wholesome physical and mental recreation with teachers and leaders adequately trained.

VII. For every child a dwelling place safe, sanitary, and wholesome, with reasonable provisions for privacy, free from conditions which tend to thwart his development; and a home environment harmonious and enriching.

VIII. For every child a school which is safe from hazards, sanitary, properly equipped, lighted, and ventilated. For younger children nursery schools and kindergartens to supplement home care.

⁸From White House Conference, 1930, *Address and Abstracts of Committee Reports*, by permission of Appleton-Century-Crofts, Inc., publishers.

IX. For every child a community which recognizes and plans for his needs, protects him against physical dangers, moral hazards, and disease; provides him with safe and wholesome places for play and recreation; and makes provision for his cultural and social needs.

X. For every child an education which, through the discovery and development of his individual abilities, prepares him for life; and through training and vocational guidance prepares him for a living which will yield him the maximum of satisfaction.

XI. For every child such teaching and training as will prepare him for successful parenthood, homemaking, and the rights of citizenship; and, for parents, supplementary training to fit them to deal wisely with the problems of parenthood.

XII. For every child education for safety and protection against accidents to which modern conditions subject him—those to which he is directly exposed and those which, through loss or maiming of his parents, affect him directly.

XIII. For every child who is blind, deaf, crippled, or otherwise physically handicapped, and for the child who is mentally handicapped, such measures as will early discover and diagnose his handicap, provide care and treatment, and so train him that he may become an asset to society rather than a liability. Expenses of these services should be borne publicly where they cannot be privately met.

XIV. For every child who is in conflict with society the right to be dealt with intelligently as society's charge, not society's outcast; with the home, the school, the church, the court and the institution when needed, shaped to return him whenever possible to the normal stream of life.

XV. For every child the right to grow up in a family with an adequate standard of living and the security of a stable income as the surest safeguard against social handicaps.

XVI. For every child protection against labor that stunts growth, either physical or mental, that limits education, that deprives children of the right of comradeship, of play, and of joy.

XVII. For every rural child as satisfactory schooling and health services as for the city child, and an extension to rural families of social, recreational, and cultural facilities.

XVIII. To supplement the home and the school in the training of youth, and to return to them those interests of which modern life tends to cheat children, every stimulation and encouragement should be given to the extension and development of the voluntary youth organizations.

XIX. To make everywhere available these minimum protections of the health and welfare of children, there should be a district, county, or community organization for health, education, and welfare, with full-time officials, coordinating with a state-wide program which will be responsive to a nationwide

service of general information, statistics, and scientific research. This should include:

- a. Trained, full-time public health officials, with public health nurses, sanitary inspection, and laboratory workers
- b. Available hospital beds
- c. Full-time public welfare service for the relief, aid, and guidance of children in special need due to poverty, misfortune, or behavior difficulties, and for the protection of children from abuse, neglect, exploitation, or moral hazard

For *every* child these rights, regardless of race, or color, or situation, wherever he may live under the protection of the American flag.

QUESTIONS, PROBLEMS, AND EXERCISES

1. In what ways have adult attitudes toward children changed since the early Christian era?
2. What does the expression "teaching the whole child" mean to you?
3. What importance should the teacher place on the child's interests in guiding his educational development?
4. Prepare a five-minute discussion on "educational implications resulting from a better understanding of child growth and development."
5. Do you think that childhood is a special period in life? If so, in what respects? What do authorities on child growth and development say?
6. Prepare a five-minute discussion of "Conflict between the standards of the school and those of the home." Will they vary with the environment? If so, in what way?
7. Make a list of from eight to twelve ways in which instruction today should be different from instruction of twenty-five years ago, in the light of changes in American life and problems of children.
8. Discuss ways of diminishing passive recreation on the part of the child.
9. Make a survey of your community in order to learn the children's clubs that are functioning and number of active members in each club.

Chapter 3

THE NATURE AND OBJECTIVES OF INSTRUCTION

1. THE RELATION OF INSTRUCTION TO GROWTH

Much superficial and inaccurate thinking about the curriculum¹ arises from the failure to see and understand clearly the fundamental relationship between curricular materials and the growth of human beings toward the objectives of education. Many teachers and administrators have never carefully thought through the place of the curriculum in the educational process. Many teachers have accepted the *status quo* as represented by the subject offerings authorized by the board of education and textbooks adopted for those subjects.

Deviations from what has been taught usually grow out of immediate practical influences, sound or unsound, such as the desire to have children succeed in spelling, learning multiplication tables, or the desire to please parents or other individuals or groups in the community. Other changes are the results of the teacher's attempt to follow trends, often without fully appreciating what the trends really are or upon what principles they are based.

Whatever is taught, whether sound or unsound, is justified in the minds of many teachers either in terms of bad psychology, such as a fallacious interpretation of the operation of transfer of training, or in terms of the relationship of interest and effort or in terms of considerations which are really of secondary importance. No approach or consideration in the matter of the selection of curriculum material is sound which is not a direct outgrowth or application of the principle that the curriculum is a contribution to the environment of learners, so selected, arranged, and presented as to influence the growth and future behavior of the learners for whom it was intended.

¹ *Curriculum* and *curricular materials* are used to refer to the total growth-stimulating materials and situations selected and arranged for instruction and learning in the schools without reference to the limits of any subject, field, or period of time; *course of study* is used to refer to the body of curricular materials, perhaps including some methods, organized for a given subject, for a given period of time.

2. THE DYNAMIC NATURE OF THE INDIVIDUAL

There are certain characteristics of living organisms and particularly of the human being that give education its significance. If teaching and learning are to be most effective, they must be adapted to these characteristics. Briefly, education is the adaptation of the individual to his environment, the changes that take place in him which enable him better to function in the world in which he lives and will live. Teaching is, then, the direction of this adaptation. In other words, it is the management and control, as far as is possible, of the changes that take place in an immature individual. In the following paragraphs this theory of education will be examined in detail.

Growth Is Constantly Taking Place.—Every living organism, plant or animal, is constantly undergoing change. An organism which is not undergoing change is not alive. Even dead organisms usually undergo change. The changes typical of living organisms and those typical of dead organisms differ in one important respect. The organism which is no longer alive is typically in a process of disintegration and degeneration. The living organism is in a constant state of growth and development, though in its most advanced state it may tend toward degeneration.

The most rapid period of growth of various organisms is the first part of their normal life span. It is also in the early period of the organism's life that its growth is most positive and integrative as contrasted with the tendency toward degeneration in the last period of its normal life span. The normal life span for cats is approximately 15 to 18 years, for dogs from 10 to 12 years. It is within the first year of life that cats and dogs make the larger part of their growth physically and mentally, though they may continue to grow both physically and mentally and to undergo change which may be called learning at a decreased rate until death.

Since growth is so rapid in the first portion of the life of the organism, those organisms for whom this period is relatively long have a greater chance to be influenced in their growth by environment, in other words to be educated. The human, therefore, having of all animals the longest period of infancy, is indeed favored by nature.

Growth as the Result of Heredity.—All change in an organism is attributable to two sources. The first of these is heredity. When a seed is planted in the ground, it may be predicted with a fair degree of reliability what its shape, size, and color and in general the pattern of its life performance as a plant will be. To be sure, some influence

may be exerted over these matters by control of heat, light, moisture, and other factors in its environment, but the influence of these environmental factors is limited. A carrot seed, for example, may not be developed so as to produce tomatoes, running vines, or large round leaves.

Environment has little or no influence upon the human as to the number of its eyes, ears, legs, or arms. These and many other physical characteristics are strictly a matter of heredity—species heredity, racial heredity, family heredity, or a combination of these. The color of one's eyes, the shape of one's nose, fingers, and ears are only very slightly matters of environmental control, as is the normal color of one's skin.

Growth as the Result of Environment.—Growth, while the result of both heredity and environment, is in some respects much more a matter of heredity. In other respects, environment is the more important factor. Even in physical growth environment may wield an important influence within the limits set by heredity. It is difficult to influence height and weight, yet to a limited extent it can be done in most individuals through nutritional processes. Height can be so influenced only in childhood, but weight at any age. Speech and other skills in expression are acquired, not inherited, as are ideals, most if not all our attitudes and interests, and our physical as well as our mental skills.

In all directions, however, limits to growth are set by heredity—by the species of the animal and the heredity of the individual. These hereditary limits are apparently laid down in the character of the tissues of the cortex and nervous system especially, but also in all his physical structure. The capacity of a bird, for example, to acquire a language is indeed very limited as compared to the capacity of a normal human being. The capacity of the human for growth is an individual as well as a racial matter. Some human beings learn much more rapidly and are able to learn much more difficult things than others. Racial differences in capacity for growth are much less significant than those among individuals within the same race.

The Course of Study and Methods of Teaching as Environment.—This principle of hereditary limitation of capacity for growth is universal. No organism is capable of unlimited growth in any direction. Those who have to do with the guidance and stimulation of growth must be familiar with the limitations of the individual whose growth they wish to influence. The curriculum-maker, and the teacher to the extent she is a curriculum-maker, must know the limits of

growth of the individuals for whom they would control environment for the purpose of influencing growth.

From all this follows a most important conclusion. It has been pointed out that growth is constantly taking place and that growth is determined by heredity and environment. From the moment of birth, even from the beginning of embryonic life, heredity factors are fixed, and nothing can be done to change them. If growth is to be influenced, it must be through environmental channels. It has often been said that "experience is the best teacher." That cannot but be true, for experience is the *only* teacher. If the growth of the organism is influenced in any way except through its experience, the result is *not* learning—it is inheritance.

With these things in mind it should be clear, then, that the function of the school is to provide an environment which will result in influencing growth to a greater degree, and in more desired directions, than would result from the experience the learner would ordinarily come to have. *The curriculum and methods of teaching are no more than provisions by means of which appropriate educative experiences are assured.* They may include anything which will cause the learner to act, feel, and think now in such a manner as will cause him in the future to act, feel, and think, as it is desired that he should act, feel, and think. It follows naturally that the curriculum and classroom procedures are not to be thought of merely as means of causing youngsters to learn certain sets of materials or even to learn the heritage of the race. No element of our cultural heritage is a thing of intrinsic value, to be "passed on" to the young. It is a *means to an end* and must be so considered. The end is the kind of individual that we set out to produce—an individual who lives happily and with benefit to society.

The Criterion of Educational Values.—It is the recognition of this important basic truth that enables one to understand and to appreciate adequately the place of guidance and other extracurricular activities in education in proportion to their influence upon growth. It is the failure to think through and back, to and from, this basic conception which leads to the belief that certain curriculum materials have a privileged place in the school regardless of their potential contribution to the education of the learner.

By means of this basic criterion one may judge the educational validity of all types of curriculum materials and methods of teaching—pictures, excursions, assembly programs, discussions, conferences, and community participation, as well as reading material, recitations, pupil

writings, and teacher talk. Anything in school or out, in books or out, in subjects or out, which will cause pupils to have educative experiences, that is, experiences resulting in desirable growth, has a legitimate place in the curriculum in proportion to its influence upon the type of growth desired. This clearly means not only that the educational environment of the school includes all extracurricular activities, including assemblies and guidance service, but that all such activities and services should be planned, carried on, and evaluated according to the same basic philosophy as the rest of the curriculum.

3. THE OBJECTIVES OF LEARNING AND TEACHING

The objectives of learning and teaching must be conceived as the changes one wishes to bring about in an individual. Perhaps teaching should be thought of as bringing a youngster into contact with his environment under such conditions as will influence his growth in the desired direction. How one acts, feels, or thinks, is, as has just been pointed out, determined in large part by how one has acted, felt, or thought in the past. If, therefore, it is desired to influence the actions, feelings, or thoughts of individuals, it is necessary to see to it that the environment of these individuals is such as will cause them to act, think, and feel in ways conducive to acting, thinking, and feeling as desired in the future. But of course, the whole process involves knowing what actions, feelings, and thoughts are desired. If it is desired to influence growth, one must first decide upon the fundamental question "growth towards what?" What kind of individual do we wish to produce?

Statements of the Objectives of Education.—There have been in the past hundreds of notable statements by individuals or groups of individuals regarding the aims of education. Some of these have been in terms of *abilities* of individuals, e.g., clear thinking, forceful speaking, and ability to get along with others. In recent decades the more notable statements have been formulated in terms of the *functioning* of the individual in certain stated areas of activity in which almost all individuals are certain to be called upon to function.

Some of these statements emphasize "individual" development, i.e., the objective of education is to develop to the fullest extent the potential powers of the *individual*. Some emphasize development of the individual for his own benefit, others for the benefit of society, and still others for the benefit of both.

It should be clear that the complete development of all the powers of the individual as an aim of education is an abstraction which will

not bear careful scrutiny. There are "powers" which had better be left undeveloped. There must be a *selection* of "powers," and the selection must be in terms of some *set of ultimate values*, e.g., communicating his needs or social cooperation. Otherwise powers of destruction or powers of no considerable value to anyone might well be thought of as the objectives of education.

The more important recent statements of educational aims in terms of functioning in areas of activity are based upon the fundamental assumption that education should serve the welfare both of the individual and of society. The following formulations are illustrative:

I. The Objectives of Self-realization

The Inquiring Mind. The educated person has an appetite for learning.

Speech. The educated person can speak the mother tongue clearly.

Reading. The educated person reads the mother tongue efficiently.

Writing. The educated person writes the mother tongue effectively.

Number. The educated person solves his problems of counting and calculating.

Sight and Hearing. The educated person is skilled in listening and observing.

Health Knowledge. The educated person understands the basic facts concerning health and disease.

Health Habits. The educated person protects his own health and that of his dependents.

Public Health. The educated person works to improve the health of the community.

Recreation. The educated person is participant and spectator in many sports and other pastimes.

Intellectual Interests. The educated person has mental resources for the use of leisure.

Esthetic Interests. The educated person appreciates beauty.

Character. The educated person gives responsible direction to his own life.

II. The Objectives of Human Relationship

Respect for Humanity. The educated person puts human relationships first.

Friendships. The educated person enjoys a rich, sincere, and varied social life.

Cooperation. The educated person can work and play with others.

Courtesy. The educated person observes the amenities of social behavior.

Appreciation of the Home. The educated person appreciates the family as a social institution.

Conservation of the Home. The educated person conserves family ideals.

Homemaking. The educated person is skilled in homemaking.

Democracy in the Home. The educated person maintains democratic family relationships.

III. The Objectives of Economic Efficiency

Work. The educated producer knows the satisfaction of good workmanship.

Occupational Information. The educated producer understands the requirement and opportunities for various jobs.

Occupational Choice. The educated producer has selected his occupation.

Occupational Efficiency. The educated producer succeeds in his chosen vocation.

Occupational Adjustment. The educated producer maintains and improves his efficiency.

Occupational Appreciation. The educated producer appreciates the social value of his work.

Personal Economics. The educated consumer plans the economics of his own life.

Consumer Judgment. The educated consumer develops standards for guiding his expenditures.

Efficiency in Buying. The educated consumer is an informed and skillful buyer.

Consumer Protection. The educated consumer takes appropriate measures to safeguard his interests.

IV. The Objectives of Civic Responsibility

Social Justice. The educated citizen is sensitive to the disparities of human circumstance.

Social Activity. The educated citizen acts to correct unsatisfactory conditions.

Social Understanding. The educated citizen seeks to understand social structures and social processes.

Critical Judgment. The educated citizen has defenses against propaganda.

Tolerance. The educated citizen respects honest differences of opinion.

Conservation. The educated citizen has a regard for the nation's resources.

Social Applications of Science. The educated citizen measures scientific advance by its contribution to the general welfare.

World Citizenship. The educated citizen is a cooperating member of the world community.

Law Observance. The educated citizen respects the law.

Economic Literacy. The educated citizen is economically literate.

Political Citizenship. The educated citizen accepts his civic duties.

Devotion to Democracy. The educated citizen acts upon an unswerving loyalty to democratic ideals.²

It will be observed that these statements are not fundamentally different from that of Herbert Spencer almost a half-century ago in which he defined education as preparation for "complete living," which included activities in five principal categories in the following order of importance: (1) self-preservation, (2) rearing and discipline of offspring, (3) economic life, (4) social and political relations, (5) leisure.

Essential Relationships.—To summarize, it is the purpose of education so to stimulate and guide the growth of the individual that he will function effectively in certain areas and activities of life upon the importance of which there is fairly general agreement among careful students of education—vocation, home, citizenship, and enjoyment of leisure—and will also possess in high degree mental and physical health and vigor and the skills and interests appropriate to most effective learning in the future. The curriculum must be the best possible selection and arrangement of stimuli to experience resulting in the maximum growth toward the kind of person who will function effectively in the areas indicated by a sound statement of the objectives of education.

At all times in the organization and revision of the curriculum, the general objectives of education must be kept in mind and a balance maintained so that growth will be stimulated toward all objectives. Citizenship and health should never be subordinated or neglected in favor of education or leisure, nor vice versa. Each general objective of education must be analyzed and broken down into limited objectives or types of human growth which are essential to or contribute greatly to the attainment of the objective. Such an analysis will not only contribute to the selection of curriculum materials but is almost essential to any high-grade curriculum planning.

4. TYPES OF EDUCATIONAL GROWTH OR EDUCATIONAL OUTCOMES

Types of Educational Outcomes.—For the purposes of this discussion, it is convenient and practical to think of the outcomes of learning experiences as belonging to different classes according to their nature. Among the types of educational outcomes are the following:

² *The Purposes of Education in American Democracy*, The Educational Policies Commission of the National Education Association, 1938, pp. 50, 72, 90, and 108

1. Detailed, factual information
 - America was discovered by Columbus in 1492.
 - A foot is equal to twelve inches.
 - Carbon dioxide is used in a common form of fire-extinguisher.
 - Six and eight are fourteen.
 - London is the capital of England.
2. General principles
 - A sentence is a group of words expressing a complete thought.
 - To divide by a fraction, invert the fraction and multiply.
 - Distance = rate \times time
3. Understandings, meanings, definitions, general concepts, orientations
 - The meaning of democracy
 - The concept of gradual progress
 - Orientation in a new community or school
 - The meaning of cooperation
4. Skills emphasizing mental activity
 - Ability to add, subtract, multiply, etc.
 - Ability to think logically
 - Ability to outline or abstract printed materials
 - Ability to express self in written form
 - Ability to read rapidly
 - Ability to conduct group conferences
5. Skills emphasizing motor activity
 - Riding a bicycle
 - Handwriting
 - Skiping
 - Swimming
 - Painting
 - Clear enunciation
6. Habits
 - Various habits of courtesy, e.g., saying "Thank you" when favored
 - Various habits of neatness, e.g., putting away tools after use
 - Various habits of healthful and sanitary living, e.g., brushing of teeth before retiring
 - Various habits related to personal appearance, e.g., combing hair every morning
 - Capitalizing, crossing all "t's" and dotting all "i's"
 - Checking all arithmetical computations
7. Ideals
 - Ideal of being courteous
 - Ideal of being honest
 - Desire to be well thought of.

Desire to be like a certain person
Desire to be respected as a good worker
Desire to help playmates and friends

8. Interests

In national public affairs
In flowers
In airplanes
In skillful speech
In improving one's own social graces
In new scientific discoveries

9. Tastes

Like for good literature
Dislike for rowdiness
Like for exercise
Like for company of intelligent persons
Prejudice against cheap literature and low-grade movies

10. Attitudes

Open-mindedness in matters of religion
Appreciation of the good qualities of persons of other colors
Acceptance of persons of low economic status
Commitment to democracy
Opposition to unfair practices

Each of the objectives of education, e.g., effective citizenship, recreational efficiency, domestic competency, is achieved only by the development of contributory psychological outcomes of several, if not all, of the ten types outlined in the foregoing. The curriculum exists for the purpose of providing the experience which will guide and stimulate the growth and development of the appropriate psychological outcomes and therefore must be so chosen, arranged, and brought into contact with the learner as to produce those outcomes which are indicated from an analysis of the objectives of education.

The determination of what should be included in the curriculum may best be made by proceeding somewhat as follows :

1. Determine the objectives of education in terms of the kind of ultimate end product desired, e.g., the good citizen, vocational competence, etc.
2. Determine for each of the characteristics of the kind of person desired the necessary or contributory information, attitudes, interests, skills, habits, tastes, concepts, principles, and understandings.
3. Select and arrange according to pupils' interests, abilities, and previous growth such curricular materials as will result in the development of the necessary information, skills, attitudes, etc.

Upon first thought this procedure seems quite logical and practical. If these determinations and selections could be made objectively and accurately, we would indeed be well on our way toward a science of education. Needless to say, however, the matter is not as simple as that. There are too many factors involved, and too much information which is not available is needed, particularly in step 3. Curricular materials result in different experiences in different individuals, and experiences apparently alike result in different influences upon growth, to say nothing of the fact the school is only one, if indeed a most important one, of the sources of environmental influences upon growth.

Types of Behavior Components.—Nevertheless it is a useful procedure, almost indispensable to clear thinking about the curriculum, to break down each of these principal areas or objectives of education into smaller units. There is not any one thing that we can call good citizenship. It is made up of a great variety of components in behavior, and each of these is a phase of growth which requires guidance and stimulation. To enumerate even the majority of these would involve more space and time than are available here. They tend to fall into categories, however, and the good curriculum is balanced in that it does not fail to provide stimuli for all categories.

Let us review briefly these categories as they apply to good citizenship. Being a good citizen involves each of the following :

1. *Knowing what is right and effective in the society in which the person is a citizen.* This knowledge consists of some which must have been learned previously, particularly fundamental principles, some which the citizen will most probably possess incidentally to his life in the society and some which he will have to acquire as the specific needs arise.
2. *Being willing to behave in a way which is right and effective.* This may be in part a matter of heredity, but it is probably in larger part a matter of learning. To insure right and effective behavior, the individual must be invested with appropriate ideals and attitudes and he must be kept from the development of unfavorable ideals and attitudes, e.g., ideals of excessive personal power or gain, ideals of racial, national or regional supremacy over others, attitudes of ill will or contempt toward other groups or classes of society, and attitudes of indifference to matters of honesty, sexual regularity, the welfare of others, etc.
3. *Being willing and able to behave in an appropriate and effective manner also involves the possession of interests which will lead one to read and investigate and to become informed relative to matters upon which intelligent decisions must be made by the citi-*

zenry of the society in which one lives and to discharge the duties of any office to which one might be elected—e.g., labor problems, international relationships, various types of private and public social security.

4. *Developing appropriate skills*—skills in getting on with others, in self-expression, in thinking clearly, and in evaluating what he may read or hear on questions confronting or likely to confront citizens of his time.
5. *Acquiring wealth of appropriate habits*, so that right and effective behavior is only to a small extent a matter of conscious decision. It becomes more and more automatic due to habits of industrious, honest, thoughtful behavior.
6. *Acquiring a working collection of useful concepts and basic general ideas* which enables the citizen to understand and evaluate human experience and proposed lines of social action. He knows, for example, what constitutes democracy, communism, fascism, and socialism. He is not satisfied with cheap substitutes for democracy and is not stampeded by fine-sounding but fallacious doctrines or deceived by the application of terms like *communism* or *fascism* to practices which are really democratic in nature.

The foregoing brief analysis might well be expanded into an analysis which would occupy a sizable volume in itself. No teacher would be capable of carrying in mind all the possible skills and attitudes which we may call *behavior components* even should he be capable of listing all of them. Indeed he must become so oriented in such matters that he recalls them in service as an artist, not as a scientist.

The teacher and any one else participating effectively in course of study construction must think through what information, concepts, habits, skills, interests, ideals, attitudes, tastes, and appreciations are required for good citizenship, health, recreation and leisure, and home leadership and efficiency. This is an important intermediate step which can be eliminated or skimmed only at the peril of poor course of study construction. Only after such a determination can one safely proceed to plan for experiences for learners which will result in anything like the maximum contribution of school subjects to the aims and objectives of elementary education.

Behavior Components and Instruction.—Each of the objectives of education is achieved only to the extent that appropriate behavior components have been acquired. Vocational competence, for example, consists of skills, habits, information, attitudes, and interests. Some of these are general or universal in that they apply to all or a great number of specific occupations. Some are quite specialized in their applica-

tion. Some behavior components—e.g., attitudes toward industry, skills in reading—are involved in several, if not in all, objectives of education.

It is the function of instruction to stimulate experience which will result in desirable growth, i.e., the acquisition to an optimum degree, considering time limitations and the capacity and maturity of the learners, of as many as possible of the behavior components involved in the various objectives of education. Behavior components should be acquired in proportion to the importance of the contribution which each one makes to the attainment of the educational objectives and the number of objectives which it aids the learner in attaining. It now becomes increasingly clear how complicated the matter of adapting instruction to objectives really is, especially when one recognizes that with the passage of time there is certain to be an increase or decrease in the relative contribution of some of the more specific components (certain items of information, specific skills, etc.) to a given objective of education.

Concomitant Behavior Outcomes.—The process of curriculum construction is further complicated by the fact that the attempt to develop desired behavior components always gives by-products—sometimes quite important, sometimes quite undesirable. To this sort of outcome of instruction or learning Kilpatrick applied the term *concomitant outcomes*. Perhaps they are more the result of the methods of instruction than of the content, but it is hard to draw the line, and it is clear that some grow directly out of content.

A child's attitudes toward school, toward authority, toward learning in general, toward himself, toward his parents, and toward his classmates are usually influenced by the degree to which he finds the curriculum or parts of it interesting and apparently useful, and himself capable of mastering it. His interests in various fields of learning or vocations are undoubtedly affected by his experiences with school subjects as they are taught.

Those who are familiar with child guidance, mental hygiene, and problem boys and girls are well aware of this phenomenon and can cite impressive instances in which teachers have caused the development of most powerful growths in personality—some of them malignant and systematic, some of them fortunately wholesome as well as pervading. Very often the concomitant or by-product outcome is much more important than the growth actually intended as a direct result of the learning activities.

This is particularly important in the use of incentives in instruction. Learning activities which appeal to the child as pleasure-giving

or otherwise worth doing result in favorable attitudes toward everything associated with their learning activities, including the subject, the school, and the teacher. To a much smaller degree learning and instructional activities will result in these favorable attitudes if they appeal to the learner as worth doing for the sake of the resulting learning, even though not pleasurable in themselves.

Less effective in developing favorable attitudes are instruction activities which are both unpleasant and seemingly unlikely to result in worth-while learning. It is important to bear in mind that the learner must not only be convinced that the learning likely to result is worth while to him, but also that it will bring him returns not too far in the future.

Also very important with respect to concomitant learning is the degree to which the learner succeeds in mastering the tasks involved in the learning activities. If he fails consistently or frequently, he is most likely to develop unfavorable attitudes toward the materials, the subject, the schools, and the teacher, and is quite likely to develop a lack of confidence in himself, at least with respect to the particular field of learning.

5. COORDINATION OF CURRICULUM WITH OTHER FACTORS INFLUENCING GROWTH

The teacher, as well as other curriculum-makers, should bear in mind at all times that the effect produced upon the child is the result of a considerable number of factors, of which the curriculum is only one. The direct effect is the resultant of a number of component forces, one of which is the curricular materials

Among the other environmental components may be mentioned the following :

1. The previously acquired background of the learner including
 - a. Vocabulary
 - b. Interests
 - c. General information
 - d. Background in the particular field
 - e. Out-of-school experience
 - f. Attitudes
2. The home background of the learner including
 - a. Interests and attitudes of the parents
 - b. Opportunities for study- - physical aspects, books and periodicals, assistance of parents
 - c. Experiences and activities which are a part of home living

3. The effects upon growth of other contemporary influences :
 - a. Radio
 - b. Movies
 - c. Newspapers and periodicals
 - d. Library
 - e. Companions
 - f. Work experience
 - g. Contacts with adults

The instruction cannot be planned except in view of, and in adjustment to, the forces which influence the individual's growth, any more than it can afford to ignore the hereditary factors in growth. The school is indeed a supplementary institution. This fact has important implications for the teacher and for his functional activities which should be mentioned at this point.

The Supplementary Nature of School Instruction.—By reason of its supplementary character the school must keep in at least fair adjustment to the rest of the learner's environment.

1. The specifications for the desired product of the schools must be drawn in the light of the conditions and demands of society as the learner will find it, including those conditions in contemporary society which call for compensatory or corrective education.
2. When some other social institution or area of the learner's environment no longer influences growth toward the objective of education as it did formerly, the school must follow one of three alternatives. It must (a) re-educate the particular social institution or some other agency to take over and serve as a replacement, (b) allow the particular educational service to go unperformed, or (c) adapt the school program so as to assume the particular function no longer operative.
3. When the educative influences of out-of-school experiences duplicate those of the school, the school should (a) determine the degree to which certain instructional activities are no longer necessary and (b) adapt instruction so as to eliminate superfluous activities.

The Curriculum and Changing American Life.—It is unfortunate that careful research and the ingenuity of the best minds cannot develop a perfect or even near-perfect curriculum once for all. The bases upon which instructional programs and activities must be built are in a constant state of change. In the first place the pattern of responsibility of the school changes from time to time. With changes in the home, in modes of amusement, in national and international problems, in vocational life, and in numerous other areas, the responsibility of the school for education, for vocation, for intelligent

citizenship, for home membership, for recreation, and for other things increases or decreases. Changes are likewise required in the nature of school education itself.

In another place in this volume will be found a discussion of important changes in American life to which the school must adjust itself. No more will be said on the subject at this point other than to point out two very important facts:

1. The course-of-study maker and the teacher must possess a workable orientation with respect to American life, its conditions, its problems, its currents and changes, and they must be able to evaluate American life in terms of the changing demands which it makes upon education.
2. The course-of-study maker and the teacher must visualize accurately the other components of human growth—the influences of home, church, the press, commercial entertainment, the radio, industry, and social companions upon the development of information, skills, habits, concepts, ideals, and attitudes.

It follows naturally that if school instruction is to remain in anything like adequate adjustment to the needs and conditions of American society as the learner will find it and to the learner's needs and responsibilities as he will find them in that society, teachers, textbook writers, and other curriculum-makers must be in touch with American society—its institutions, its problems, its trends, and the implications of all these for the curriculum. It is also a logical corollary that the curriculum should be regarded as a growing, living thing which in all probability is at least a few steps behind in its adjustment to the needs of learners and of society. As a matter of fact the lag of the curriculum behind conditions and requirements of the times is in many respects a matter of decades rather than of years.

The Curriculum and Changes in Pupils.—Not sufficiently recognized is the fact that the interests of children of any given age also change with the passage of years. Their customs, what they read, what they like to do, how they like to play, their attitudes toward parents and teachers—all these and many other characteristics of children important in the adjustment of curriculum to the individual are matters that do not remain fixed—as textbook writers and publishers and the more discerning teachers and principals have learned.

Significant Variation of Individual Responses.—It has been observed that education is an individual matter. The growth of a group of individuals may be stimulated or guided by a common stimulus—a

book, a lecture, or a picture—but it is not the group that grows, it is the separate individuals who compose the group. There are as many separate and different growth results as there are individuals within the group. From any poem or short story one individual may increase his interest in reading and a confidence in school and the teacher, while another pupil may develop a prejudice against poems and stories, an increased dislike for school, and an increased lack of confidence in the teacher. Still another may develop an appreciation of good reading, a respect for the teacher, and a lack of confidence in himself.

One is reminded of an experiment in chemistry employing a rack of test tubes containing different liquids and a beaker with still another liquid. Upon being mixed with some of the fluid in the beaker, the liquid in one test tube will turn brown, in another green, in another black or maroon. What transpires in a child's mind, and indeed in his nervous system, is a matter both of the outside stimulus and the inside apperceptive mass. Therefore it is necessary not only to offer different subjects but also to lead the children in one class learning one subject to do, read, say, think, and feel different things. The curriculum must be flexible enough to provide for this.

There has been for some time a tendency in practice toward differentiation of pupil groups according to differences in needs, interests, abilities, and industry. Today the tendency is in another direction—that of adaptation to the individual or small groups within the class.

There is also a pronounced tendency to adapt all aspects of learning situations to the individual. It has become apparent that, whether sections for instruction are formed on the basis of general mental ability, of probable need, or of any other criterion, there will always remain a wide variety among the abilities, capacities, interests, present needs, future needs, and experiential background of the individuals who compose the sections.

The Consequent Responsibility of the Teacher.—Because of these ever-present significant variations, courses of study must always be regarded as flexible, tentative outlines. It is well to have courses of study, as it is often well to have textbooks, but in practice they must be adapted to the individuals in the class. This of course is largely the responsibility of the teacher.

It is the teacher's responsibility to bring the pupil into contact with problems and challenges which will facilitate the exploration of his interests. It is the teacher's responsibility to bring the pupil into contact with things to do, to read, to say, to make, to hear, to feel, to see, and to challenge, and thereby to insure future behavior which will be

desirable in terms of the objectives of education and of the potentialities of the individual. This of course calls for a fund of knowledge on the part of the teacher about the individual pupils. The teacher should have convenient access to pertinent data on the pupil's special interests, vocational, recreational, and social; on the expanse of his vocabularies, especially his listening and reading vocabularies; on his general intellectual ability; on his special aptitudes, mechanical, musical, and the like; on his out of school experience; on his physical developing; on his stock of schoolbook information, the areas of his maladjustment, if any, and his most pronounced attitudes, ideals, and prejudices.

It is upon all these types of background of the individual learner, and more, that experience is projected for interpretation. The degree and nature of effects of experience upon the growth and future conduct of the learner are conditioned by his background. With respect to many of these items, the majority of learners of a given school grade or section may be relatively homogeneous, but there are always significant deviations. Because of these deviations, principals, supervisors, and teachers are, to a far greater extent than formerly, systematically gathering and recording data concerning pupils. Whereas formerly the data were not made available to teachers (at least not conveniently available), in many schools today it is for the teacher's use that such data are gathered. Naturally, an alert teacher who has trained herself will soon come to note and carry in mind many impressions and facts concerning each learner. She should not only be on the lookout for these and be constantly thinking of ways to adapt the curriculum to the individual, but she should record her data for future use by herself and other teachers.

The Curriculum and Methods.—While it is serviceable for the purposes of discussion to differentiate between curriculum and methods, it should be recognized that they are inseparably interrelated and are associated parts of the educational environment of learners in school.³ While methods may be thought of as the procedure of bringing the learner into contact with the stimuli to experiences which will result in influencing his growth, one must not lose sight of the fact that methods are also educational stimuli or important parts of stimuli of educational experiences.

It should be clear that pupil growth is determined both in nature and amount by the method of causing learners to have the experiences thought to be effective in developing the desired types of growth.

³ See Chapter 15, "Selecting and Organizing Learning Materials."

What happens to the learner educationally is determined in part, and often in large part, by such aspects of methods as :

1. The degree and adequacy of adaptation of learning materials and activities to the maturity, interests, and background of the learner, to the objectives of the unit, and to the subject of instruction
2. The nature of questions and questioning evaluated in the light of their adaptation to the interests, abilities, and backgrounds of the learner, the objectives and sequence of the unit, and subject of instruction
3. The opportunity provided for initiative, planning, and responsibility on the learner's part
4. The definite efforts of the instructor to emphasize ideals, attitudes, tests, judgments, and understanding as contrasted with factual knowledge and subject skills
5. The evaluation techniques of the teacher and the consequent relative emphasis upon such things as those mentioned in Number 4
6. The opportunities provided for such experiences as applying principles to life, projects and other "doing" activities, group cooperation, discussion, and community participation
7. The manner of speech and other aspects of personality of the teacher

While the opportunities for writing method into textbooks and courses of study are limited, the final determiner of the curriculum is the teacher and she should not fail to recognize her responsibility for providing the most effective school environment for growth toward the objectives of education.

QUESTIONS, PROBLEMS, AND EXERCISES

1. To what extent in your opinion do teachers think of education as assisting young people to be happy, useful, healthful citizens and parents? Give examples for your answer.
2. Be able to give a five-minute talk on the significance of the relatively long period of infancy in the human species.
3. Make a list of ten areas of growth which are controlled largely by heredity, and ten which are controlled largely by environment.
4. Make a list of a few ways in which one learns or grows which are determined largely by out-of-school or preschool experience.
5. Be prepared to give a five-minute talk on "The teacher as a determiner of growth."
6. Write in your own words your idea of the objectives of elementary education.
7. List three specific examples of each of the ten types of educational outcomes.

8. For one of the objectives of education list at least one of each of the ten types of educational outcomes.
 9. What are concomitant outcomes? Give several examples. What is their relative importance in later life?
 10. What, if anything, do you think the school can and should do relative to out-of-school environmental influences upon the child?
 11. Be able to give a five-minute talk on "The curriculum and changing American life," considering the inferences to be drawn from the material of this chapter.
 12. Why do individuals respond differently to the same subject matter in instruction? What can, or should, the teacher do in regard to these differences?
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Chapter 4

BASIC PRINCIPLES OF LEARNING AND MOTIVATION

1. PRINCIPLES OF LEARNING

The Laws of Learning.—Over a period of more than half a century, various students of learning have attempted to discover and state the “laws of learning.” Nothing like common agreement has been obtained upon any one statement of a set of such laws, though in almost every instance it is obvious that the so-called “laws” do express the operation of principles which are real and effective—which condition learning.

That no final acceptable statement has yet been made may be attributed to a number of causes. In the first place, instead of *learning*, there exist *learnings*: and these learnings, e.g., the learning of facts, the learning of skills, and the learning of ideals, are not all of the same type with respect to nature and phenomena. They do not take place in exactly the same manner, and consequently there is no set of laws which underlie all types and operate in the same manner with respect to all. Secondly, it is quite difficult to differentiate completely one from another all the various operative principles of learning. They seem to overlap somewhat.

On the following pages, no attempt will be made to set forth or to defend a consistent, complete system of laws of learning. Instead, the effort will be made to describe briefly the most important principles which a successful teacher must observe in theory or in practice and preferably in both. The teacher who understands the nature, the importance, and the more important implications of these laws will not only understand and better evaluate suggestions for teaching procedures, but, if possessed with at least average capacity for creativeness and imagination, will be able to plan the details of teaching procedures fairly well for herself.

The Principle of Activity, Use, Frequency, Exercise, or Repetition.—It is axiomatic that one learns only by some activity that goes on in his neural system: seeing, hearing, smelling, feeling, thinking, physical or motor activity, or some other kind of activity. The learner

must be active in some way with respect to what is to be "learned," whether it be information, a skill, an understanding, a habit, an ideal, an attitude, an interest, or the nature of a task. Sometimes being "active" no more than once produces a modification of the individual of such a nature as to result in a desired degree of learning of more or less permanency. An individual may never forget a certain happening or some aspect of it. Ordinarily, however, the activity must be repeated if the desired learning is to be achieved.

Other factors being equal or inoperative, learning is in proportion to the frequency of the repetition of the activity. Other factors—interest, vividness, attention, effect of the activity, interval between repetitions, readiness for the activity, and background of the learner—are, however, rarely if ever equal or inoperative. Mere repetition, if conducted under unfavorable conditions, may not result in learning what is desired. It may in fact result in learning other things not desired: there may be concomitant undesirable outcomes or misunderstandings. For some reason repetition, if it takes place under favorable conditions, tends to result in more permanent learning in the fields of skills and habits than in the fields of information and memory in general.

The learning effects of repetition are conditioned by the spacing of the repeated operations, though no general rule can be stated. In learning to spell a long word, to operate a complicated machine, or to type, one repetition a day is usually not effective. At that rate one forgets between repetitions all or practically all one learns from one repetition. On the other hand, continued repetitions in immediate succession in many situations reach the stage where further repetition at the time yields no learning dividends because of fatigue, loss of interest or attention, or other reasons, some of which we are not able easily to identify.

The Principles of Recency, Disuse, and Relearning.—What one forgets, how quickly, and how completely, depends upon so many factors that it is not possible to predict exactly the effects of forgetting. It is obvious, however, that what one has learned but has not used or recalled for some time is for the time less well learned. If a fact is well learned, one may not be able to recall it at all after a period of disuse, depending among other things upon the period of disuse, the degree of overlearning, and the interest of the learner in it. Skills and habits, particularly motor skills and habits, do not fade nearly as quickly nor as completely as facts. To a lesser degree,

the learning of attitudes and interests likewise persists longer than the learning of facts. It is surprising how a telephone number or a street address, one's own for example, which was once well learned, may escape recall after a year or two, while the skills involved in riding a bicycle, playing a piano, or rowing a boat will persist in considerable degree until the general physical deterioration of old age sets in. The necessity of use to prevent forgetting suggests cumulative reviews and programs of maintenance of important facts, principles, interests, skills, and habits.

Ordinarily, however, relearning requires less time and effort than original learning. Quite frequently when it is necessary to relearn, e.g., to restore a skill or knowledge in a certain field to a former level, the saving is often as much as three fourths or more in terms of time. This is especially true in the field of skills. Usually it is much less than a third or a half when the learning has to do with verbal memory. The greater the learner's understanding and meaning for him of the subject matter, the greater the saving in relearning.

The Principle of Effect, Satisfaction, or Annoyance.—The immediate effect of any activity upon the future activity of an organism is conditioned by the immediate effect of the activity in terms of the richness of the experience. One remembers best those experiences which were particularly painful or particularly pleasurable. One tends to avoid repeating an activity which is likely to cause a repetition of unpleasant experience. "The burnt child dreads the fire," and he remembers well the pain of the burn. Likewise an individual is prone to remember a humiliating experience, though one may forget what one was trying to learn when the humiliating experience occurred.

The results of many experiments performed with a view to discovering how far the effects of learning activities influence learning seem to indicate clearly that rewards and punishments are effective and that naturally pleasant and unpleasant effects condition learning. However, the principle of effect operates unevenly and is influenced in its operation by other principles. It is clear too that the by-products or concomitant effects of the use of artificial rewards and punishments are often very undesirable and more than offset the value of the learning. Perhaps one of the most desirable and powerful types of pleasurable effects is the knowledge of progress or achievement or praise discreetly bestowed.

The immediate effect of a learning activity, e.g., whether it is pleasurable or otherwise, is dependent to a considerable extent upon whether there is mind set, purposiveness, or consciousness of mean-

ingful relationships. If to participate in a certain learning activity, for example, forces one to cease effort in an area or in a direction in which one is interested before one is ready to desist, it is most likely to produce irritation or resentfulness, at least at first. If the learning activity fits in with activities in which one is interestingly engaged, or seems to contribute to a purpose which is in the mind of the learner, the effect is pleasurable and therefore favorable to learning.

Knowledge of Success and Failure.—Hundreds of experiments have been conducted in efforts to discover the effects of knowledge of progress or lack of progress upon learning progress. It has usually been found that knowledge of success improves learning more than lack of information concerning progress. The results of these experiments are not entirely consistent and are difficult to interpret. It seems clear, however, that in the first stages of learning the majority of learners, especially young learners, are more effectively influenced by commendation than by condemnation. Continued scolding usually has a negative effect. It appears that commendation is most beneficial when the learner needs encouragement to revive his flagging spirits.

One must remember that individuals respond differently to adverse criticism and to praise. Censure is relatively more effective with capable learners and with confident extrovert learners, frequently more so than too much praise. Criticism, except of the most friendly sort, is likely to do more harm than good with less capable learners and sensitive learners of the introvert type. In general, teachers who frequently give mild encouragement mixed occasionally with a mild, friendly, and frank type of criticism, are more effective than teachers who are ever adversely critical or lavishly commendatory or who vacillate from severe criticism to extreme praise. Knowledge of failure seems to have different results upon different individuals and according to circumstances. It seems most likely that knowledge of failure, especially with respect to chronic or complete failure, is harmful to many and beneficial only (1) to those who have not made very sincere efforts to learn or (2) when the knowledge of failure is diagnostic and not too discouraging. Knowledge of failure may be helpful in bringing into focus just where the failure is and what has caused it, without giving the individual the impression that greater achievement is impossible for him.

The Phenomenon of Association.—Since the time of Aristotle at least the principle of association in learning has been recognized as important. In the eighteenth and nineteenth centuries, the English

Associationists, who constituted an important school of thought in psychology, centered their attention upon theories or philosophies of learning based upon the phenomenon of association. They believed that ideas which can be associated in the mind with other ideas tend to be recalled more readily than ideas not so associated. When one of a pair or group of ideas is recalled, the other or others tend to be recalled also. The more associations a particular idea forms in the mind of the learner, the more readily it is recalled.

Several types of association should be recognized, including association in time, contiguity in space, and contiguity of meaning. If two or more experiences occur at the same time or are in consciousness at the same time, the subsequent presence of one in mind tends to bring into consciousness the other or others. When one idea, feeling, or act has occurred in the experience of an individual immediately preceding another idea, feeling, or act, the recurrence of the former tends to cause the recurrence of the other. Likewise ideas which have been in the mind of the learner, associated as to their place in space, develop the property of association so that the recall of one tends to bring the other into consciousness. Thirdly, ideas which are associated in meaning in the mind of the learner develop a tendency to be tied to each other in future consciousness. A special type of this principle is the principle of *sequence*. The applications of this principle in learning are varied and widespread, being operative especially in learning which involves sequence in the formation of habits, the development of skills, and memorizing.

The implications of this principle for learning and teaching are many and of great importance. Experiences which should occur together, or in sequence, in future thought, action, or feeling, should be experienced together or in sequence in learning. By so arranging the learner's experiences one may go far in conditioning future experience. The applications are not confined to the areas of skills, habits, or ideas, but are found also in the area of emotional reactions. It is not only possible but unavoidable that a feeling of sadness, anger, humor, reverence, joy, or duty shall be so conditioned that it will recur when an experience recurs which has been previously associated with the same feeling. One may be conditioned to feel sad in a certain house, to feel reverent in the presence of a cathedral, to feel inferior in the presence of a certain person or situation, to feel belligerent when a certain idea, e.g., fascism, is mentioned, to feel admiration when strength is exhibited, to feel friendly toward a given word, idea, or type of person, and to feel afraid in the presence of a snake, a large body of

water, or of a certain type of responsibility in connection with which one has previously felt unsuccessful or unhappy.

For teaching, one of the more important implications of the principle of association is that what one wishes the student to retain, subject to ready recall, should be associated with a variety of other things, particularly with needs and applications of what is being learned. This phase of learning is important in transfer of training, discussed later in this chapter. The degree and certainty of "transfer" is proportional to the number and strength of associations between the situation first experienced and the situation to which transfer is to take place.

It is also a matter of common observation that an important factor in retention is meaning or understanding. The better a passage, a skill, a definition, or the basis for appreciation of an experience is understood, the more quickly learning will reach the state of mastery and the more recallable and lasting it will be. The relative inefficiency of learning and teaching in schools of previous generations was a natural consequence of the attempt to "learn" without understanding. The expenditure of time in teaching for understanding is usually, particularly where permanence is desired, economical of time and effort in the long run. "The longest way round is the shortest way home" in many instances.

Phases and applications of the principle of association may be seen in such schools of thought in educational psychology as the "organismic," with its "field property," and the "integration" or "unity" idea and movement. Learning things in relation to each other and in relation to some fundamental unifying principle is not the same as learning things separately. Ideas, facts, or actions experienced in association are not the same as the identical ideas, facts, and actions experienced individually. There are meanings, new ideas, new facts, new actions, which are not in any one or in the sum of the individual ideas, facts, and actions, but which grow out of and upon the relationships of the components. There are events and movements in history, attitudes and actions of peoples, scientific phenomena, and other things worth learning which are the outgrowth of combinations of facts, ideas, chemicals, and so forth and which cannot be explained or understood from experience of any one component of the combination. The components must be associated, often in a particular way, to produce the resultant which is worthy of learning. Conversely, when a complex learning situation is analyzed and experienced one step at a time, great care must be taken that relationships and properties of

the complex whole are not lost sight of. Otherwise, most important things may escape learning.

Perhaps none of us is without several experiences which demonstrate this principle in a humorous way. When one is expecting a telephone call, he may answer the telephone when the doorbell rings. A friend's remarks may be ridiculously misunderstood because we were expecting something different from what the friend actually said. To some extent, one experiences what one expects to experience—sees what he is looking for even if it is not really there to see.

The current emotional set or mood also determines, to some extent in most instances and to a great extent in some, how a learner will react to teaching and to learning activities and materials. It goes without saying that if the learner is at the time optimistic, critical, weary, enthusiastic about something else, worried, happy, or depressed, what he learns will be associated with his mood when he learned it. It is difficult to make any adequate adjustment to the varying moods and mind sets of each of a number of individuals in a class. Nevertheless, a teacher should realize that these factors condition learning.

The Principle of Apperception of Mind and Emotional Set.—The learning effects of any given instruction upon any given individual vary with the individual's mental background at the time, regardless of his previous mental content. By *mind set* is meant the degree of absorption of the mind at any particular moment and the content of consciousness at that time—the ideas, thoughts and purposes of the moment. Samuel Chester Parker, noted authority of a generation ago in methods of teaching, cites an example of this principle from his own experience:

I was riding in a train and happened to look over the shoulder of the man in front of me at the newspaper which he was reading. I could just see the top of the paper and read there the following large headline, extending clear across the page:

GOOD HATS A QUARTER

Inasmuch as I always take advantage of end-of-the-season reduction sales of men's furnishings, this statement interested me (although good hats for a quarter seemed impossible), and I decided to look into the matter further when I got a chance. Soon the man left his seat to go into a smoking car. I picked up his paper and, turning to the desired page, found that instead of reading

GOOD HATS A QUARTER

the headline read

GOD HATES A QUITTER

It was Monday morning, and the paper in question contained reports of Sunday sermons printed with large-type headlines running clear across the page. If I had been in the religious frame of mind at the time, instead of the bargain-hunting frame of mind, I might have read the headline correctly at the first glance.

The number is legion of schoolboy howlers or boners which result from the natural tendency to interpret one experience in the light of previous experience, as indicated in the following examples.

Reciting the Lord's Prayer one little boy was heard to say, "Harold be Thy name." Another begged, "Give us this day our jelly bread." A New York child petitioned, "Lead us not into Penn Station."

When Umpqua, Ore., pupils were told classes would be dismissed because of teachers' institute, Lonnie Leonard, eight, startled his parents with: "No school tomorrow. The teachers are going to an innocent toot."

A first-grader in a Kirkland, Wash., school volunteered to recite a nursery rhyme. "Little Miss Muffet sat on a tuffet," he intoned, "eating her cuives away."

The children were singing "Oh, Susanna." Suddenly we realized three-year-old Billy had a version all his own as he sang lustily, "I come from Alabama with a bandaid on my knee."

Many suggestions for making teaching effective grow out of this principle of apperception, which possesses great validity and under-spread application. Explanations must be made in the light of the background vocabulary and previous experience of the learner. Care must often be taken (a) to fill in gaps with necessary background for understanding new materials, sometimes in the form of a review; (b) to put learners in an appropriate frame of mind for many new ideas or learning activities—perhaps sometimes by developing interest or a desire to learn, sometimes by explaining the purpose of the learning activity.

Often the failure to utilize this principle occurs not because the teacher does not realize its importance but because she does not know the background, previous experience, interests, and present frame of mind of the pupil. The teacher is usually prone to overrate the pupil in this respect and to presuppose a background which exists only to a very limited extent if at all. To be most effective, teachers should acquire as much knowledge as possible about students in their classes ¹

¹ See Chapter 2.

by means of interest and experience inventories, vocabulary tests, and other exploratory devices, employed at the beginning of a year or at the beginning of a unit of instruction.

The principle of "mind set" also operates to condition the nature of the effect of any learning activity or the suggestion to a learner that he engage in a given activity. When there is present in the mind of a prospective learner a purpose upon the accomplishment of which he is intent, an interruption is very likely to be resented. When Harry is intent upon reading a newspaper, playing a game, or even perhaps working a problem in arithmetic, an interruption in the form of a suggestion to quit and read a magazine, or go to assembly, or study spelling is likely to be unwelcome. Unless the suggested activity is one which keenly interests or immediately excites him, the effect upon him is much more likely to be one of annoyance than of pleasure. The more absorbing and pleasurable the activity in which he is engaged, on which he has a particular mind set, the more he dislikes interruption.

There are many today who think that to the growing child the *complex* is not only synonymous with the *psychological*, but also with the *concrete*. They are convinced that when complex behavior situations are broken up into small units of behavior they become atomistic, artificial, and unnatural. They also are definitely of the opinion (in particular, those believing in the Gestalt school of thought in psychology) that the child has very great capacities for learning behavior of a very complex type, and give many illustrations of a youngster's acquiring a behavior of a complex type with apparently not too great difficulty. It is also claimed that, when the complex is broken up artificially into simple units, the youngster is less interested in learning because of the apparent lack of applicability in real life, and also that the youngster finds it difficult to reconstruct these units into forms of complex behavior which are really the objectives of the instruction.

At least three important general principles of teaching seem to grow obviously out of this principle of learning: (1) the approach to new learning activities should be made in such a manner as to utilize previous mind sets; (2) quite frequently time and care must be devoted to setting the stage by reviews, discussions, observation trips, and so forth to prepare the learner for coming learning experiences; and (3) the probable effect of any learning stimulus, materials, methods, or activities upon the learner must be considered in the light of what he already knows or does not know, his interests, abilities, concepts, and tastes.

Certainly more specific principles of teaching procedure have their

source of validity, at least in part, in this principle of learning. Among them may be mentioned the following :

1. Proceed from the simple to the complex
2. Proceed from the concrete to the abstract
3. Proceed from the near to the remote
4. Proceed from the fundamental to the accessory
5. Proceed from the psychological to the logical

The reader is invited at this point to think of at least one example showing how each of these principles may be utilized to advantage in a field in which he expects to teach. He is also invited to think of examples of how there may be conflict between two of these principles, e.g., between the first two above.

The Principle of Readiness.—Naturally one of the more important considerations in directing learning is that of the learner's readiness. Algebra can be taught with some degree of success to an average child in the fifth grade, but with great difficulty and uneconomical expenditure of time, as is true of the attempt to teach reading to learners aged 3 or 4. It may be stated as a general rule that whatever may be postponed until later will be learned more easily, provided that the learner in the meantime is growing through learning. Naturally, not everything can be postponed, even if it could, valuable opportunities for learning would not be fully utilized. Something must be taught each year. It is a matter of relative readiness. Until a decade or so ago, there was a tendency to force learning materials earlier and earlier in the life of the child. Long division, for example, which had once been taught in high school, was introduced in many schools as low as the fourth grade. The result was not only uneconomical efforts at learning but the development of undesirable attitudes in the relatively unsuccessful child and misconceptions of his own capacity for learning mathematics.

In recent years, with a growing understanding of child psychology and a growing realization of the folly of crowding nature too much, there has been a greatly increased attention to the matter of readiness and an increased recognition of the value of a greater experiential background upon which instruction may be based. As a result, there has been a tendency to relocate many items of instruction in later grades, particularly in the subjects of reading, mathematics, grammar, and literature. There have been many attempts to discover at what grade, in accordance with the principle of readiness, the various topics or phases of topics of courses of study should be taught. Many inves-

tigators have entertained the hypothesis that, just as in the maturation of a chick there comes a time when it learns most naturally and economically to peck for food, so in the life of a child there is probably the time of golden opportunity, if one could locate it, when each of the various more important things to be learned could be best taught. Up to the present, no means have been discovered whereby we may identify the "golden age." We have, nevertheless, learned that some ages are better than others for some things and this approach to the improvement of instruction is still under way. For example, reading may be best begun on a systematic basis at about the mental age of $6\frac{1}{2}$ or 7 years. What a child can learn to read well and how soon depend also upon the nature, range, pattern, and amount of experiential background.

More intensive study of this principle seems to reveal, among other things, that (1) it is not practical to attempt to force nature too fast in developing understandings, interests, ideas, or skills; (2) the optimum time for teaching various items is conditioned not only by the maturation and growing background of the learner, but by his developing and changing interests and his growing needs for the outcomes in question; (3) the decision must be made on the basis of a consideration of various factors, including (a) the necessity for learning much before leaving school and (b) the necessity for learning something early as a basis and background for understanding and learning other things; (4) with few exceptions, there is no very special time at which the human is "ready" for any particular subject matter; it is a matter of adapting the instruction to the learner's degree of readiness both in terms of basis for understanding and in terms of his interests and needs.

Factors of Interest, Effort, Attention, Vividness, Intensity.—

It has long been observed that the contribution of repetition to learning is not only a matter of frequency but also of other factors, including the attitude of the learner and his ability to attach meaning to the materials. Perfunctory drill or repetition is relatively ineffective, as in reading passages with a low level of attention and interest. Experimenters have discovered that repeating materials for the subjects of the experiment to learn does not always result in any appreciable degree of learning. It seems clear that learning is dependent largely, in addition to accurate repetition, upon a type of experience in which there is a high level of attention and in which there is upon the learner's part an interest in the learning activity and an interest in achievement of learning. Learning is achieved

most quickly and completely when the learner is an *active* and a *willing* participant in learning activity.

Many experiences are retained indefinitely even though there was no repetition. In this category are experiences of unusual intensity or meaning to the individual. One rarely forgets the sight of a dying person, a violent storm, a very humiliating incident, a most eagerly sought reward or victory. One also tends to remember longer his more vivid learning experiences of a less spectacular nature—the visualized, concreted, colorful, more or less dramatic and lifelike ones.

Because of the prime importance of this principle and because of the difficulty in obtaining a high level of interest, attention, and active participation among learners for what we try to teach in school, a later section of this chapter will be devoted to discussion of the approaches to motivation, interest, and attention.

Physiological Factors.—Several physiological factors condition learning to an appreciable extent. Learning declines with fatigue, particularly learning of very difficult or abstract materials or procedures, but physical fatigue must be of a very marked degree before it in itself interferes seriously with learning. Ordinarily, fatigue affects learning principally by interfering with or dividing attention or is of the nature of mental fatigue, ennui, or boredom. It tends to interfere more with the acquisition of understanding than with rote memory, more with acquisition of complex and fine skills than with habits.

Pain tends to interfere with learning much in the same manner as does fatigue, serving to distract attention rather than to prevent learning if attention can be maintained. Drugs have various effects upon learning, most of them inimical or negligible. Some drugs serve to produce wakefulness or alertness for a time and to that extent contribute to learning.

Learning is materially conditioned by the general physiological condition of the individual. Individuals with nutritional defects, with chronic fevers or with systemic infections of any sort, with very low blood pressure, or with glandular malperformance are almost certain to be handicapped in learning. Such effects are noticeable not only in individuals, but in regions where these physiological maladjustments are common.

Learning and Intelligence.—What one can learn and the rapidity of learning are very much dependent upon the capacity of the individual for learning—apparently upon the composition and modifiability of the cortex and the nervous system. Learning capacity is not

greatly dependent upon race or sex. A teacher should learn the limits set by heredity for each of the individuals in each of her classes (I.Q.) and the stage of mental maturity or ability (M.A.) and adapt teaching materials and methods accordingly.

For the slow or dull learner there must be concrete, sensory, life-like, simple, practical materials and activities; for the bright pupil there must be challenges in the form of complex abstract materials and materials and methods calling for ingenuity, generalization, and creativeness.

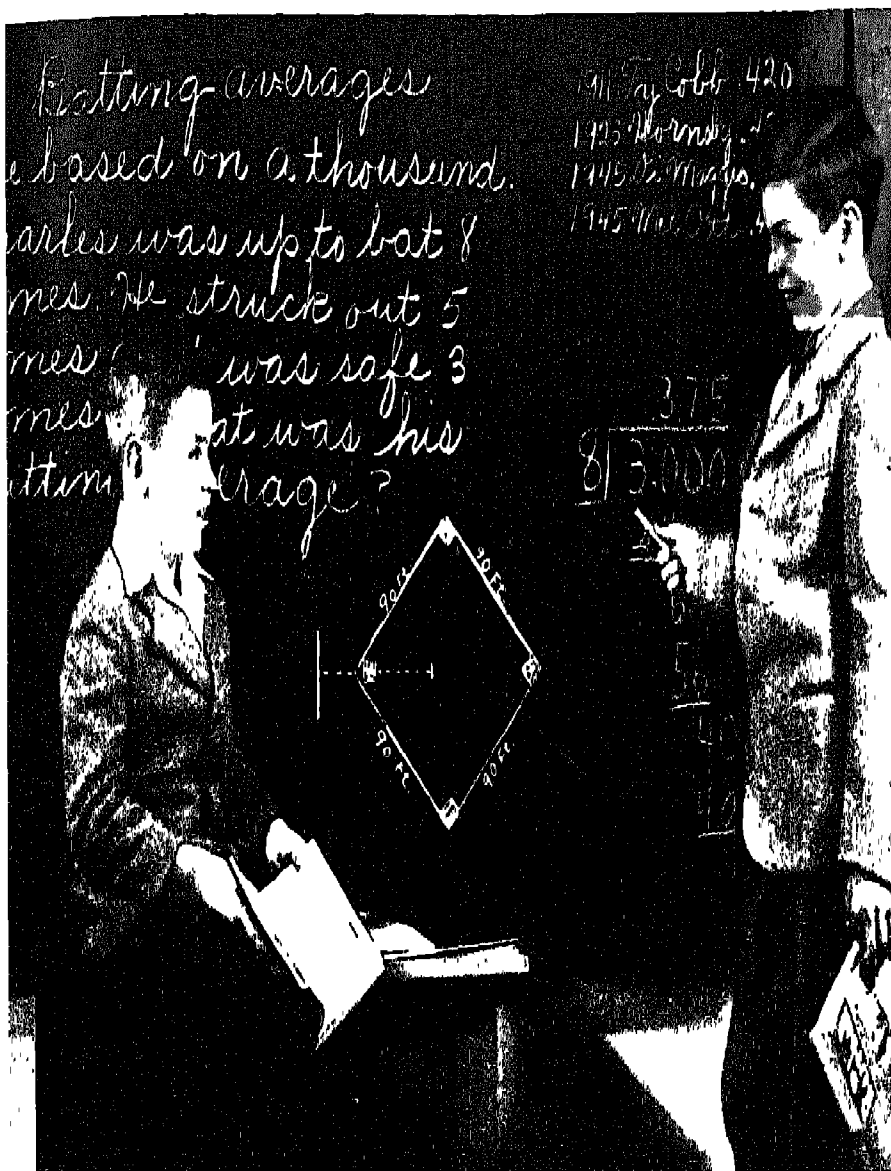
The Phenomena of Transfer of Training and Formal Discipline.—Learning outcomes achieved in a specialized situation or restricted field may function under certain conditions in other specialized situations or restricted fields, or in all fields. Ideals of honesty and honest behavior developed in the classrooms tend to carry over to life outside the classroom. However, neatness developed in arithmetic may be expected to carry over to neatness in person or in room very little if at all, primarily because neatness in person and neatness in arithmetic, though both referred to as *neatness*, are very largely two different things. The degree of carryover or transfer is known to depend upon certain principles which may be stated as follows:

1. The degree to which there is identity or similarity between the training situation (stimulus-response) and the field or situation to which transfer is made as to (a) content: ideas, facts, principles, concepts, vocabulary; and (b) procedure: of study, of action
2. The degree of general intelligence and imagination of the learner which will enable and cause him to recognize that the effects of training in a previous situation or situations apply to various new situations; to think in a given new situation of the possibilities that might be employed
3. The degree and extent to which in the original training a general ideal was held before the learner, e.g., the ideal of neatness, and the extent of the possible areas to which transfer could be made was emphasized, e.g., the transfer of the study of general rules of English grammar to oral and written expression.

It is of the greatest importance that teachers be constantly alert to the possibilities and point out the more useful applications or "transfers" of what is learned to areas or situations in which specific training for reasons of lack of time or equipment could not be given.

2. INTEREST, ATTENTION, EFFORT, MOTIVATION

It is one of the most important and fundamental responsibilities of the teacher to see to it that the pupils for whom she is responsible



Arithmetic correlated with pupils' out-of-school interests becomes vital and significant

(Des Moines, Iowa, Public Schools)

engage in appropriate learning activities with sufficient ardor and with sufficient attention to assure substantial learning progress. If the learning activities are selected and arranged appropriately and the approach and the personality of the teacher attractive, most younger children will be found to be eager to learn. That the condition diminishes somewhat as the child becomes older is in part attributable to the failure of teachers to adapt materials and methods to his acquired interests and potential interests. Many well educated and scholarly teachers often have very limited success in teaching, because of their inability to get learners to engage in the activities emphasized for learning.

The most successful teacher is the one who has the knack or the know-how or the personality (usually a combination of all these) to get children to do those things which they must do if they are to learn, with a spirit which they must have if they are to learn well. She must be able to put pupils in a frame of mind and to plan learning activities so that they are interesting in themselves, meet specific felt needs of the learners, and are entered upon and continued with vigor because of genuine values rather than artificial incentives such as rivalry, marks, and love of approval.

Evaluation of Incentives to Learning Activities.—The relative value of motives or incentives to learning activities may be judged by the following criteria :

1. *Power of appeal*: the degree to which the incentive stimulates the learner to continued learning activity
2. *Universality of appeal*: the proportion of the learners involved who will be motivated by the incentive or motive
3. *Concomitant educational outcomes*: the nature of the educational effects of the use of the incentive (a) upon the learner's attitude toward and interest in the subject, (b) upon the learner's attitude toward the teacher and the school in general, (c) upon the learner's attitude toward himself and his capacities, and (d) upon the development of social and ethical characteristics

It is a common but unfortunate practice of some teachers, especially beyond the lower grades, to use incentives primarily upon the basis of the first two criteria above and to ignore the third. As an educational policy this is shortsighted, fallacious, and unjustifiable. The practice is followed so generally because many teachers are willing to sacrifice long-term educational gains in order to meet immediate difficulties by destroying or failing to develop permanent interest.

No matter how effective the use of a given incentive may be (appeal to rivalry, use of honor rolls, threats of failure, for example) as a means of goading children to do problems and exercises in arithmetic or study spelling lessons, it is unwise to employ it, if by so doing the teacher fails to develop an interest in the subject or activities involved. Indeed it is actually reprehensible to resort to that kind of incentive if it causes the pupil to dislike the subject and to develop attitudes likely to cause him to avoid further participation in these activities.

A century ago Horace Mann, the great evangelist for public education in New England, wrote the following: "If a teacher desires that his pupil should be a great man rather than a good one, or that he acquire wealth rather than esteem; or that he should master Latin rather than ride his own spirit, or attain high official preferment rather than love the Lord his God with all his heart and his neighbor as himself—then he will goad him on by the deep driven spur of emulation or any other motive until he will outstrip his fellow, at whatever peril to his moral nature."

It is not difficult to appreciate the observation of a parent who protested, "Even if my son did make a B in that teacher's course, I would have preferred that he not have studied under her at all. What little scientific information and jargon he learned, he will soon forget, and certainly it is poor return for the dislike which her teaching developed in him for science."

The practices of teachers who use general artificial devices for stimulating learning activities possess other objectionable qualities. They constitute very definite incentives for children to study for these artificial rewards rather than for educational growth itself. They fail to lead children toward intellectual interests and contribute to the tendency of children to cease to study when the artificial pressures are removed. In addition, the power of the artificial devices, like those of drugs, diminishes with continued use.

Many of these artificial incentives breed undesirable character traits such as conceit on the part of the brightest and despair on the part of the least able, overdeveloped appetite for competition and for winning, destruction of the tendency to work with and for others as opposed to working against others, and a willingness to cheat, to use various devices to mislead teachers, and to "learn" only what will be checked up on.

Some incentives commonly employed have much power but apply to a small minority of a group of learners. Honors and distinctions do not apply to all the superior students and have little appeal to the student who realizes that his chance of attaining the honors or dis-

inctions is negligible. The possibility of failure is of little motivating value to students who with a little effort can be certain of passing.

Some incentives appeal to all or nearly all students but do not appeal in a manner likely to result in vigorous learning activity. In this category may be placed the desire to be a good citizen or to be of service to humanity, to be a learned rather than an ignorant person, to be a success in life, and many others which are too general or remote to stimulate immediate learning.

Types of Interest, Attention, and Needs.—As John Dewey pointed out clearly in 1913,² attention is essential for economical learning and it is directly dependent upon and grows out of interest. Where interest is lacking, learning activity goes on under the handicap of divided attention and mental activity. "External mechanical attention," as Dewey said, "to a task as a task is inevitably accompanied by random mind-wandering along the lines of the pleasurable. The spontaneous power of the child, his demand for realization of his own impulses, cannot be suppressed." Wherever there is effort to attend, there is an inherent weakness; and while there are occasions when "effort" or the "will" to attend must be resorted to, it should not be overworked, as it so commonly is in classrooms.

Interests are of two kinds, direct (intrinsic) and indirect (mediate). Attention may be spontaneous, growing out of interest, habit, or sensory insistence, or it may be forced by the will or by unwelcome distraction.

Needs may be classified as immediate or deferred, and as intrinsic or mediate. From a mediate need, a need not for the thing itself as a means to an end, indirect interest and forced attention usually follow.

Direct and Indirect Interest.—It is not always easy to distinguish sharply between direct and indirect interest. There are some things that we are interested in doing merely because to do them gives us pleasure. We are interested in these activities because they satisfy predispositions, yearnings, and tastes which may be either inherited or acquired. Examples of direct interests are those commonly exhibited by children, in hearing funny stories, in "reading" picture stories (comics), and in playing some forms of games and the interest some children have in drawing or in making a stamp collection.

An indirect interest is one such as that in studying because of the need to know something or the desire to make a good mark or not to appear stupid in class. An indirect interest may and often does be-

² John Dewey, *Interest and Effort in Education*.

come a direct interest. Often pupils study because of an indirect interest. With good curricula and a good teacher, these pupils, or many of them at least, should eventually become interested in learning activities. One of the most important functions of all teaching is to develop a variety of keen, desirable interests. Unfortunately most "schoolmarms," male and female, sacrifice interests to the much less valuable outcome of temporary mastery of school subject information or skills.

What Activities Are Interesting?—Most individuals have certain identifiable predispositions. They are like tastes. Some things they just like to do. Most children like to be active physically, though this desire decreases as they approach maturity. Most children are curious, particularly about things that are strange. Most boys and girls like contests, particularly group contests. Many other interests common to children may be identified by the observing teacher.

What is interesting depends upon current value to the learner and to those of his age group at the time. Children usually like to do what other persons of their age are doing and think worth doing. To some extent, varying with different individuals, what is interesting depends also upon what others in general seem to like to do and believe worth doing.

Interests are also individual. What interests one child may not interest another. One enjoys making things. Another prefers to talk about airplanes. One likes to play in sand, another to be with a group, another to read stories, and another to work with clay. Many teachers began their work not because of their interest in teaching but as a means of livelihood and later developed an interest in teaching for itself.

Attention: Spontaneous or Forced.—One usually gives spontaneous attention to that which is of direct interest to him. No effort of will is required. To those activities which are performed not because of any direct interest but for some ulterior purpose one forces his attention. It is, to be sure, a matter of degree. Some activities are of sufficient direct interest or have become so nearly a matter of habit and routine that little effort is required to pay attention to them. Spontaneous attention is the type one gives also to loud noises, moving objects, and strange sights, which may or may not be pleasurable or even interesting in themselves.

Wherever there is forced attention, the learning situation is not at its best; attention is divided. At least some consideration must be given to the matter of forcing attention, and always there is com-

petition for attention. There is rarely the degree of attention we think of as absorption.

Motivation and Need: Generic and Specific.—While there are those who believe that children should engage only in activities which are intrinsically interesting, they find it difficult to convince many other interested parties of the wisdom of their position. There is much of value to be learned which, at least at first, must be learned by means of *motivated* activity. The learner must be caused to engage in the activity necessary for learning not because of direct interest but because by so doing he may gain something he wishes or avoid something he does not like. He operates with forced attention from indirect interest and is stimulated by a motive.

To be motivated one must feel a *need*. He must wish something and must feel that to engage in a given activity will enable him to accomplish the satisfaction of that desire. Quite often, in fact almost daily, teachers themselves must develop motivation, either specific or generic. Often a person has need for a particular knowledge or skill for a specific purpose. He may, for example, need to know the location of certain cities to understand the significance of certain current news, to be able to type in order to get a kind of position he desires, to know certain facts in order to operate on or to repair a radio or an automobile, to be able to use a certain tool or machine in order to make something he wishes to construct, or to develop skill in speaking or acting in order to make a debate squad or to take part in a play. All these are specific needs. For the purpose of motivating and developing interest in the performance of learning activities the specific need is of relatively great effectiveness, depending upon the keenness with which that need is felt.

There is another type of specific need which plays an important part in the techniques of the best teachers. It is the *felt* need created by bringing pupils to see what are the specific deficiencies in their learning achievements. For this purpose diagnostic tests constructed by the teacher (if not otherwise available in textbooks) should be used frequently and teachers should observe for deficiencies young learners at work. (See Chapter 19, Section 3, for a detailed discussion.)

Generic needs do not ordinarily constitute a motivating force as powerful. The appeal to generic need does not develop a permanent interest in the activities or field of study. In addition it is likely to result in harmful concomitant outcomes—dislike for the subject, the teacher, the school, or all of these. Yet appeal to generic need must be made frequently because commonly learners will not feel a specific

need for the outcomes of the learning activities contemplated or for the activities themselves. Appeal to generic need should, therefore, be made only when there seems to be no intrinsic interest or practical felt need. Generic need is a need for some outcome of learning activity which is not a need for the particular instructional or learning materials, an outcome to which other materials or outcomes will also minister. Of this broad type is the need felt for good marks, for approval, for education or knowledge in general, and for preparation for higher grades. Also included are the needs felt to satisfy the desire for achievement, to help a team, to satisfy a sense of duty, or to avoid criticism. Almost any subject may be motivated by appeal to generic needs.

The appeal to some specific need or needs is to be preferred wherever such a need exists, not only because it is likely to be of greater motivating power and less likely to result in undesirable outcomes, but because it associates the learning materials, activities, and outcomes with their practical applications and thereby provides training in application as well as understanding of the practical significance of the outcomes acquired.

Immediate versus Deferred Needs and Values.—One of the most important characteristics of a need is the proximity of the time when the need will become *immediate*. The degree of motivating power is in proportion to the nearness of the time when what is to be learned will be useful. What is needed today is of much importance. What will be needed next week is less impelling. What is needed next year seems not at all pressing. What will be needed when one is five, ten, or twenty years older may appear to be of great value theoretically, but it is not likely that many young learners will be keenly motivated to study such matters at the present time. They are not likely to be vigorously motivated by learning activities which serve remote needs, in preference to alternative activities which are intrinsically interesting and therefore pleasurable or activities which minister to current or immediate needs.

Positive and Negative Needs and Motivation.—Generic and specific needs seem to fall readily into one or the other of two categories, *positive* and *negative*. Human beings do many things in order to achieve something desired and many other things to avoid something undesirable. A child may practice on his violin because he wishes to be able to perform well on it, or he may practice because his parent or teacher will censure him if he does not practice. A

learner may study a selection in literature because he enjoys it or because he fears being unable to perform satisfactorily when called upon in class.

It must be recognized that often the positive and the negative are different aspects of a single motive. A student may engage in learning activities both because he wishes to excel, or at least to achieve a fair mark, and also because he wishes to avoid appearing inferior or making a low mark. Specific needs, as well as generic needs, may be either positive or negative or both. For example, a student may learn what is involved in making a good table on which to study, or what information is needed to understand certain current news not only to achieve a desired objective but also to avoid failure in a specific undertaking.

While the degree to which the need appeals to a learner is most important, it is also true that positive incentives or needs are usually more effective than negative incentives or needs. While a slightly attractive reward is less motivating than the prospect of a serious punishment, rewards usually are more effective than punishments. They are, on the average, not only more effective as motivation, but they are definitely much less likely to possess undesirable concomitant outcomes such as distaste for the subject matter or learning activity, dislike for the school and the teacher, and untoward effects upon personality that result from fear and compulsion through fear. The fact that teachers employ negative incentives does not establish a presumption in their favor but stands as a testimonial to the lack of ingenuity, time, or industry on the teachers' part. Sarcasm, humiliation before classmates, and other punishments are disappearing from practice among the more successful teachers.

Natural versus Artificial Incentives.—Whenever it is necessary to resort to motivation which is of the nature of a reward or a punishment other than the natural outcome of learning, an *artificial incentive* is employed. This is always the case in the appeal to generic need. Artificial incentives are broad in their scope of application in that they appeal to the large majority of learners. They also quite frequently possess considerable motivating power. However, from the point of view of developing permanent interests, effects upon personality and upon pupil-teacher relationship, and other concomitant outcomes, they are most likely to be definitely harmful, and should be employed only in the absence of natural incentives, specific needs, or intrinsic interest which will motivate learning activity sufficiently to result in a high degree of attention.

Distractions.—Earlier in this chapter attention was called to the distracting element in forced attention when an indirect interest is employed. Mind wandering is probably always present to some degree unless the activity itself is satisfying. There are, of course, other types of distractions which should be kept at a minimum during learning activities—competing stimuli and activities, including conversation, physical discomfort, feelings of compulsion, feelings of failure and inadequacy, and the like.

Goals, Objectives and Knowledge of Achievement.—In almost every instance motivation is improved if definite, achievable, and not too remote goals are set up in the mind of the learner. Remote general goals and objectives should whenever possible be broken down into smaller and more immediate goals. Practical goals and objectives of learning activities are abilities to do, abilities to recite, objects or parts of objects made, the solution of problems, the answering of questions, the completion of projects, the attainment of skills or elements of skills, the formation of habits, and the like. Abilities "to do" include such things as to be able to tell a funny story, to carry on a conversation, and to follow directions. Assignments should be formulated in terms of such goals—specific, attainable, and seemingly desirable—not in terms of amounts of materials to be read or of number of repetitions or of general remote goals such as "to be able to speak more effectively," "to understand the history of the American people," or "to appreciate music." These general objectives should not be ignored. The learner should be conscious of them and desirous of attaining them, but they must be broken down into more immediate subgoals.

QUESTIONS, PROBLEMS, AND EXERCISES

1. Different authorities use different terms in speaking of repeated experience as the basis of learning, e.g., *activity*, *use*, *frequency*, *exercise*, and *repetition*. What differences do you see between the meanings of these terms as employed in formulating a fundamental principle of learning?
2. Think of two examples of "learning" more or less permanently a fact or an attitude from one repetition only, and two examples of relative failure to learn after many repetitions. Explain why there was learning or not in each case. What laws or principles were involved in the cases where there was learning?
3. Think of two examples of forgetting from lack of recent repetition—one of a fact or facts and one of a skill. Which tends to be more completely forgotten from disuse?

4. Mention some ways of employing "associations" to insure retention of facts or habits.
5. Give a five-minute discussion of "Readiness"—its meaning and application to learning.
6. What are the principal unique or different elements, and what is the common element, in the meanings of *interest*, *effort*, *attention*, *vividness*, *intensity*? What is the relation between interest and effort, interest and vividness or intensity, attention and vividness?
7. What are some of the implications for classroom work of the effect of fatigue upon learning? The effect of malnutrition upon learning?
8. Select one school subject and think of some learning outcomes of that subject which transfer to broad areas in life—outcomes that ordinarily transfer in large amounts. Do any other subjects result in the same transferable outcomes?
9. Mention three methods of getting learners to apply themselves which you think are good and three which you think are bad. Evaluate each on the basis of (1) power of appeal, (2) universality of appeal, and (3) concomitant outcomes.
10. Give two examples each :
 - a. of direct and of indirect interest
 - b. of spontaneous and of forced attention
 - c. of generic and of specific need
 - d. of immediate and of deferred need or value
 - e. of positive and of negative motivation
 - f. of natural and of artificial incentives
11. Discuss the role of goals in learning—the effectiveness of specific goals upon effectiveness of learning activities and the possible effects of knowledge of relative success or failure upon learning.
12. Take one side of the following question and be able to defend it in class. "Forcing children to perform unpleasant learning activities is desirable educational experience."

Chapter 5

TEACHING FOR DIFFERENT TYPES OF LEARNING OUTCOMES

As suggested in Chapter 3, educational growth may be considered as being of a number of varieties. Individuals may grow educationally by acquiring *information*—specific or general—and with various degrees of understanding. One may grow educationally, for example, by acquiring knowledge of the location of cities, mountains, and rivers, or knowledge of the rules of grammar, mathematics, or science, or knowledge in the form of understandings, i.e., “knowing” in the sense of knowing the significance and characteristics of a person, species, object, process, institution, or idea. One may also grow educationally by acquiring mental skills, motor skills, or habits of thought, feeling, or action.

One also may grow educationally by acquiring *ideals*—desired goals in the form of traits one wishes to acquire or standards one wishes to attain and to support—and by developing *attitudes*—relatively fixed tendencies of emotional reaction to individuals, to groups of people, to ideas, to institutions, to social practices, and to philosophies.

Finally, one may grow by acquiring *interests* in or predispositions toward certain specialized fields of knowledge, certain activities, and individual persons, animals, or objects and by acquiring *tastes*—preferences for certain kinds of experiences in reading, hearing, seeing, or doing. For example, one may acquire interests in historic places, inventions, sports, drama, dress and appearance, and tastes for certain types of literature, art, music, games, social intercourse, or theatrical presentations.

In this chapter there will be presented general basic concepts of (1) the relationship of learning and teaching to each of these types of educational growth and (2) the procedure in promoting learning of each of these types. In subsequent chapters, more detailed discussions of techniques of teaching for various types of growth will be presented.

1. THE ACQUISITION OF KNOWLEDGE—INFORMATION, CONCEPTS, AND UNDERSTANDING

One may grow educationally by acquiring knowledge (a) in the form of *verbatim statements* as, for example, being able to state that "A sentence is a group of words expressing a complete thought" or to recite a selection from literature or a passage from a book; (b) in the form of the *gist or general idea* of a paragraph or other passage, or of an event, a person, a movement, a process, or some other part of experience which one can state in one's own words; (c) in the form of a *general principle, concept, or rule* which one can state in one's own words or can apply to a given situation, case, or problem. These three types of knowledge vary characteristically with respect to the degree of understanding necessarily involved. Within each of the three categories learnings also differ in the amount and nature of understanding. Reciting verbatim from memory may be achieved with little or no understanding or meaning and frequently is being accepted as implying understanding and in lieu of more valid evidence of understanding.

Fortunately the tendency in teaching for the past several decades has been to put much less emphasis upon verbatim memorizing. It is not only difficult and time-consuming, quickly forgotten, and of little value unless accompanied by a high degree of understanding of the meaning of the words memorized, but there are relatively few statements or passages which there is any real need to memorize verbatim. Usually nothing can be gained by reciting a set of words verbatim unless there is understanding of the meaning of the words.

Throughout the nineteenth century, much of the activity of the schoolroom had verbatim or memoriter learning as its main objective. Verbatim recitation was impressive and was commonly accepted as evidence of learning of meaning. This was particularly true in times and among persons who were in awe of formal statements, long and unusual words, and bookish materials. Ability in verbatim recitations tended to set its possessor apart. In recent decades there has been a growing tendency to be more concerned with abilities to apply knowledge than with the mere possession of knowledge or what passed for it.

It may be desirable sometimes to memorize beautiful passages of literature and statements or rules of procedure, the ability to use which depends materially upon recalling exact words and making fine distinctions. Nevertheless, verbatim recitation without rich understanding not only possesses little utility, but to most learners it is a very difficult and distasteful task. Even the ability to use rules and

precepts which are employed completely and continually is aided very little by verbatim memorization.

It should be clear that, in studying procedures of teaching for acquisition of knowledge, one must continually be on guard to distinguish learning verbatim or near-verbatim from learning the "gist" or general content and import of information. Many of the conclusions from experimental work in the psychology of learning are based upon experiments involving only verbatim learning, and inferences from these conclusions are subject to so many limitations as to decrease the value of the so-called basic scientific principles of acquiring knowledge.

Authoritative versus Developmental Methods.—Procedures of teaching for the purpose of acquiring information and understanding tend to fall into two general categories: (1) the method of learning accepted facts or conclusions on the basis of assumed competent authority and (2) the method of developing the student's stock of information and understanding by processes of observation and reasoning.

The learning of materials from the printed page or from the spoken words of the teacher, the radio speaker, or other persons constitutes the first type. The second type is represented by procedures in which the learners' efforts are centered upon developing through problem solving or the inductive procedure the information or general principles being learned. These two types of learning and teaching may be designated as the *authoritative* and the *developmental* types of procedure.

The various techniques of teaching do not all fall precisely into one or the other of these two general types. Nevertheless, most techniques tend to be predominantly one or the other. Among those which are largely authoritative are:

1. Learning from textbooks or other references
2. Learning from lectures
3. Learning from visual or other sensory presentation by the teacher
4. Learning from class recitations made by one's self and others

Among those which are predominantly developmental are (1) the *inductive procedure* by which the learner arrives at a general conclusion—for example, the concept of cause and effect, a rule for capitalization, the "a" formula in arithmetic (e.g., $a = w_1$), certain laws of science—by examining a number of individual cases; (2) the *deductive procedure* by which the learner arrives at an inferred conclusion or solution by reasoning from previously known or given facts

or principles—for example, a learner or a class may be attempting to derive a general principle or to deduce a specific conclusion and yet receive so much help from the teacher as to make the result at least partly dependent upon “authority.” It frequently happens also that, as a teacher is explaining, she so stimulates the learners or at least some of them to think through the matter for themselves as to make the procedure at least partly developmental.

Advantages of Authoritative and Developmental Methods.—(On the basis of use, distinct advantages are claimed for both the authoritative and the developmental methods of teaching. The purported values of each method may be summarized as follows :

Advantages of authoritative method :

1. Economy of time
2. Presentation of subject matter in a logical manner
3. Requirement for ability and ingenuity of teacher lessened
4. Definite, formal presentation preferred by many students
5. Body of tangible subject matter given to pupil
6. Mastery of material presented by authoritative methods ascertainable by accepted instruments of measurement
7. Nature and difficulty of the material may justify the direct, authoritative method instead of more time-consuming methods
8. Retention facilitated by reference to textbooks

Advantages of developmental method

1. Concomitant learnings may be highly important outcomes such as (a) pupil initiative, (b) independent habits of study, (c) techniques of problem solving useful in meeting problems outside school.
2. Self-activity required of learner satisfies conditions of effective learning.
3. Retention can be reinforced by the learner's repeating the developmental process.
4. More complete response of the learner in the initial learning makes it more permanent, thereby reducing need for excessive drill and repetition.
5. Reality and vividness of the pupil's experience in reaching a conclusion or solving a problem for himself contribute to greater understanding.
6. Activities involved in developmental methods make a greater appeal to active energetic children than do the methods which foster passivity.
7. Method presents greater opportunity for the teacher to observe and diagnose the individual pupil's methods of study, personal qualities, and needs.

Developmental methods require more skill and background than authoritative methods. For this reason, beginning or mediocre teachers are inclined not to use such methods. After having experimented with and attained some mastery in their technique and having become conscious of their peculiar limitations, the teacher who is desirous of improving the quality and effectiveness of her teaching will make increasing use of developmental practices. Developmental methods may be employed with marked advantage if good judgment is exercised in regard to the degree to which the necessary outlay of time is not disproportionate to the educational outcomes which will probably result.

Direct and Indirect Methods.—Fortunately one can learn from the experience of others as well as from one's own experiences. Otherwise for a given individual the scope of learning would be limited and time-consuming. One can learn, for example, about the appearance of an object without seeing the object, about a process without seeing the procedure, about sounds without actually hearing them, about pains without feeling them, about a person, a business, a war, a legislative body, or a treaty without having any direct experiences with them. Learning can result, and a great deal of it does, from what is called *vicarious* experience—the experience of others at second hand. Practically all that one receives from newspapers and from the radio, in fact from all printed or written material, from all spoken words, and from all forms of graphic art (pictures, graphs, models, and the like), is vicarious experience.

The relative advantages of direct and indirect methods are similar to the relative advantages of developmental and authoritative methods, as will be recognized from a comparison of the two types of methods. In learning from one's own personal experiences one is likely to learn more accurately, to retain what is learned longer, to understand more completely, to be more interested in the process of learning, to see better the value of the things learned, to enjoy more greatly the learning activities, and to learn more quickly and more completely.

Nevertheless, many of the things which are desirable to learn must be learned from vicarious experience. It is not possible to experience those things which have already happened and which cannot be caused to happen again for the purpose of teaching history. The same is true of most of the content of science, geography, and the social studies, and of some of the content of all other subjects.

The teacher should at all times recognize the limitations of the use of vicarious experience in learning, and she should so plan the learning experience that it will suffer as little as possible from those limitations

Pictures, models, field trips, dramatization, and other representations should be employed frequently in order that vividness, accuracy of details, pupil interest, and understanding may be achieved. The learning situation should possess as much of reality as is possible subject to limitations on the expenditure of time and money. Because of the great superiority for the purposes of learning and teaching of various approaches and substitutes for reality and personal experience, Chapter 16 is devoted to the discussion of the values, uses, types, and techniques of visual and auditory aids.

Teaching for Retention.—Quite often information once acquired remains with one, more often it does not. Information is retained in the sense that one's neural tissue is so modified that the mental content may be experienced again in the absence of the original sensory stimulus. Whether every experience permanently modifies the tissue involved so that there is always the possibility of recall, or only a portion of experience so modifies the tissue that retention is permanent, is not definitely known. One does know, though, that much of what one experiences cannot be recalled. Whether in a given instance this results from failure of retention or failure of recall cannot be reliably determined.

The pupil does not retain all the information he acquires, or if he does he is not able to recall it. Much of what he has read, of what he has been told, of what he has experienced directly (visually or otherwise), and of what he has developed for himself inductively or deductively he is able to recall after an interval.

Several factors operate to determine what elements in a learning experience will be retained. One of the chief factors is the *intensity* or *vividness* of the experience. The degree of intensity of an experience is conditioned by

1. Degree of interest in the experience, its stimuli, and its outcome
2. Elements novel to the situation
3. Understanding of the significance of the experience
4. Impressions made by emotionally charged experiences
5. Variety and intensity of the sensory reactions involved in the experience
6. Absence of irrelevant distracting factors such as hunger and worry
7. Degree of attention to and concentration upon the experience
8. Physical fitness

Because of the difficulty of arranging classroom learning situations in which all these factors are present, it is necessary to strengthen

initial learnings by drill and review. Properly used, the developmental methods described in earlier sections of this chapter are effective in promoting satisfactory retention. While appropriate recitation procedures such as skill in questioning and giving assignments are important, they are poor substitutes for really challenging, lifelike problems in the classroom.

The principles of drill applicable to retention of knowledge are analogous to those for the development of skills and habits. These principles are discussed in Chapter 13.

Teaching for Understanding.—The distinction between acquiring information without understanding it well and acquiring information which is relatively well understood is of great importance in teaching. To acquire information with relatively little understanding (1) is difficult and requires more time than it is worth in most instances; (2) taxes student interest and tends to build unfavorable student attitudes toward the subject, the teacher, and the school; (3) yields the learner little satisfaction in its acquisition; (4) means that the student will be able to make little use of it and is likely to misapply it; and (5) fails to furnish the learner with basic understanding which would enable him to learn and understand other things better.

Many schoolboy boners are the natural results of learning without understanding, e.g.:

The circulatory system consists of veins, arteries, and artilleries.

Socrates died from an overdose of wedlock.

Wifehood indicates a woman's martial status.

A large proportion of misunderstandings and hence limited, ineffective, or wrong learning, results from the learner's lack of knowledge of the precise meaning of words. No matter how much he may recite acquired information, it is of little or no value to him if he does not know the meaning of the words or the significance of the information with respect to its uses and implications. For this reason alone, if for no other, teachers should take especial care to see that learners learn the meaning of all important words in the more important materials being studied.

Understandings involve a knowledge of the implications, meanings, and significance of units of information, e.g., the importance of a knowledge of the relative merits of different brand names of canned foods in a unit on consumer buying. Understandings also involve the answers to questions as to how something behaves under various conditions, its uses, and its properties—e.g., what happens to a copper wire when too much resistance is developed to an electrical current.

Understandings are also concerned with the significance of each of the steps in a process and of the sequence of steps. In problem solving, for example, one gets the problem in mind, searches for pertinent data, arrives at a tentative hypothesis, and checks the tentative hypothesis for verification.

Understandings likewise deal with cause and effect and other relationships such as concomitant variation (e.g., height with weight, salary and experience, intelligence and scores on aptitude tests). In the development of understandings, the following procedures, discussed more fully elsewhere in this volume, are useful.

1. Explanations—verbal and with illustration
2. Problems of application
3. Problems of evaluation
4. Discussions among learners
5. Aids, visual and audio
6. Methods, developmental as opposed to authoritative

Another important type of knowledge is the general concept, e.g., the nature of social responsibility, of a typhoon, of the poverty of India. Concepts include definitions. The increase and enrichment of concepts is one of the most valuable educational services a teacher can render a pupil, and yet the "schoolmarm," the novice, and the lesson-hearing type of teacher are ineffective at producing this precious type of educational growth.

2. ACQUISITION OF HABITS AND SKILLS

The psychology of habit formation and the psychology of the development of skills are very much the same. A *habit* is an acquired propensity for the organism to behave in the same pattern every time a certain condition or set of conditions is present in the environment or behavior of the organism or in both. The stimulating or conditioning environmental element may be quite specialized. It may involve a sequence in time, as when, immediately upon arising, one is conscious of being about to go to meet a person. It may be any person, any of a certain group of persons but no one with whom we are intimate, or it may be an individual with whom we are well acquainted.

Basic Psychology of Acquiring Habits and Skills.—The fundamental principles underlying the acquisition of habits and those underlying the acquisition of skills are very much the same. Fundamental is the factor of *repetition*. A habit results from going through the same behavior pattern a number of times under the same environ-

mental situation or conditions. A skill results from repeating a certain behavior pattern and improving it with respect to speed and accuracy, accuracy meaning effectiveness with respect to a given objective.

In acquiring both habits and skills, it is most important to repeat the behavior pattern without exceptions. Failure to perform in the given pattern under the given situation in forming a habit and failure to behave in exactly the same way and in the same sequences (except as limitations of the present ability of the individual may prevent) in developing a skill should be avoided in the establishment of satisfactory behavior patterns.

In both types of learning, opportunities for repetition should not be spaced far apart, especially in the first stage of learning. For economical and effective learning there must be interest and understanding of need, of use, of skill, or desire to be able to achieve the skill. This is especially true of the development of a skill. To insure the certainty of performance in the case of habit and improvement in the case of a skill, the performance must be associated in the mind of the learner with pleasurable consequences, especially in the case of skill development, e.g., satisfaction resulting from the knowledge or the expectation of improvement which more than compensates for whatever fatigue or boredom accompanies practice.

Permanence of Skills and Habits.—Skills and habits, both physical and mental, when once developed to a reasonably high degree of certainty and efficiency are relatively permanent acquisitions, far more so than detailed information. For that reason, as well as by reason of the essential nature of a great many skills and habits as integral parts of important education, the teacher must be alert to realize when the opportunity is at hand to contribute to the formation of a desirable habit or the development of a useful skill.

3. ACQUISITION OF IDEALS AND ATTITUDES

Teachers are ordinarily not so effective in developing the ideals and attitudes which are desired outcomes of school experiences as they are in developing skills, habits, information, and generalized ideas and concepts. This is unfortunate, as ideals and attitudes are very powerful determiners of human behavior. They constitute the *sine qua non* in education for good citizenship, the most important objective of education.

The teacher's relative ineffectiveness in developing ideals and attitudes results from three factors: (1) the degree of possession of an ideal or an attitude is relatively difficult to measure; (2) the contribu-

tion made by teaching for a week, a month, a semester, or a year is rarely measurable in the case of most ideals and many attitudes; and (3) the development of almost all desired ideals and most attitudes is the result of school experiences in many school subjects and in all grades, and of out-of-school experiences at home, at play, in leisure reading, at church, and elsewhere.

Procedures in Developing Ideals and Attitudes.—The methodology effective in developing ideals and attitudes is not so far advanced as is the methodology of stimulating the acquisition of information, or that of developing habits and skills. Ideals and attitudes cannot always be approached directly and in a simple fashion. The learning of a number fact, a date, a rule, or other sort of fact or the acquisition of a skill is something which may be assigned as a lesson for a day or a week or a month, and teacher and learner may proceed consciously and directly to facilitate the learning process.

The development of ideals and attitudes does not lend itself to a simple, direct procedure. A given ideal or a given attitude can rarely be assigned for study. In fact, contributions to the development of ideals and attitudes almost invariably accompany the acquisition of more specific skills, habits, and information. Naturally teachers tend to focus upon developing the outcomes which are the immediate objectives of the particular day or unit, progress toward which can be measured easily.

It is clear however that ideals, attitudes, and interests are powerful influences on and determinants of human and social progress and happiness, and that, once acquired, they continue to function long after the great bulk of information has sunk below the level of ready recall.

The Development of Ideals.—Educationally and psychologically speaking, an ideal is a standard of perfection accepted as such by a particular individual or group of individuals. The meaning of *ideal* therefore involves the element of subjectivity. It is most commonly used to connote a standard of excellence or a person or object possessing excellence toward which or whom the individual or individuals who experience the idealizing have an emotionalized systematic reaction. This emotionalized reaction is one of admiration, or of wishing to be or to be like.

Among ideals which are important educational objectives may be mentioned the following examples, which are classified as to types:

1. Honesty, reliability, fairness, thrift, capacity for service to others, characteristic repayment for services and favors

2. Certain dimensions of bodily figure, physical beauty, physical strength, physical skills
3. Facility of speech, ability to think clearly
4. Social popularity, social graces, leadership, good fellowship

All the ideals listed above meet social approval. Many persons accept less desirable ideals, e.g., sharpness in business deals, power over other persons, sexual sophistication, social toughness, lack of conscience, and ability to deceive others.

Obviously it is of great importance that the ideals of the greatest value to society are inculcated. Wherever high ideals are not present, lower ones are certain to exist. The behavior of any individual is determined to a great extent by the character and strength of his ideals, for it is in great part an attempt to realize those ideals.

The basic psychology and methodology of the development of ideals cannot easily be expressed in terms of specific procedures or techniques. It involves many procedures and techniques used in working toward other types of outcomes. The most important principle probably is that the learner shall have contact with the desired ideals in the form of reading, discussion, or observation of individuals possessing the ideal qualities under such conditions as will present the ideal in a favorable light.

Opportunities occur daily in almost every class for children to establish some desired ideal or to strengthen those they already possess. Either directly or by implication one or more of the desired standards can be brought into the consciousness of learners in such a way as to promote acceptance. The most effective type of approach is through personification. Children, especially, are likely to accept or develop ideals which are characteristic of some individual whom they admire. Perhaps members of their own group possess the same ideals, or perhaps the individual represents an ideal already held by the youngster. For example, if a much publicized war hero, athlete, or movie star or some well-liked older relative or neighbor possesses a good characteristic, manner, or standard of thought or action, there is considerable likelihood that a child will idealize that characteristic, particularly if the characteristic is logically associated in some way or another with the success of the one admired. To be sure, there is no certainty that the admirer will idealize all or any of the good characteristics of the hero, but the chances are favorable that the hero will become one source of ideals.

The opportunities to bring to the attention of young learners desirable ideals as portrayed by fictional characters and historic personalities are very great in teaching literature, history, and current events.

There are also numerous opportunities in teaching science, art, music, and other subjects to point out leaders in these fields deserving of emulation and likely to inspire. Opportunities to present ideals in the abstract—e.g., accuracy of calculation, neatness of written work, intellectual honesty, and service to humanity—occur in teaching every subject. Perhaps one major caution should be stated here as a fundamental principle. Teachers must be adroit in the development of ideals. Methods too obvious, too energetic, or seemingly lacking in sincerity are not only likely to prove ineffective but may actually tend to arouse antagonism or to promote indifference.

The Development of Attitudes.—Educationally and psychologically speaking, an *attitude* is an individual's predisposition toward other persons, ideas, institutions, practices, or courses. Following are some illustrations of attitudes to the development of which teachers should make important contributions:

Favorable attitudes toward: our social institutions, practices, and principles, e.g., democracy, right of free speech, cooperation, education, freedom of religious worship, thrift, peace, logical thinking, monogamy

Attitudes of tolerance toward: individuals of races, nationalities, and religions other than one's own; beliefs, practices, and opinions of others which are contrary to one's own but which are not clearly contrary to the welfare of the nation and society

Unfavorable attitudes toward: immoral, unethical, and antisocial principles and practices, e.g., waste, class distinction, physical violence, superficiality, cruelty, hypocrisy, and dishonesty

It is not easy or necessary to make sharp distinctions between ideals and attitudes or to attempt to plan a different method of teaching for each. They are quite similar in nature, overlapping in characteristics, complementary and mutually supporting each other, and the methods of developing the two types of outcomes are almost identical. In developing ideals, it is important for teachers to realize their educational importance, to watch alertly for opportunities to contribute to the development of desirable ideals and attitudes, to avoid attempts to force them unwisely by lecturing, "preaching," or compelling conformity, and to seek their development in concrete and specific situations rather than in verbal and abstract forms.

Noncurricular Contributions to the Development of Ideals and Attitudes.—The ideals and attitudes of children tend to grow out of and be influenced by the ideals and the standards of their playmates and of their teachers as they come to know them in the daily school

work. They grow out of reflection and daydreaming stimulated by biography, literature, and other factual and fictional materials. The fairness, patience, forcefulness, aggressiveness, pleasantness, democracy, sympathy, neatness of appearance, masterliness, frankness, poise, and good judgment of a classroom teacher do much to help shape ideals and attitudes of pupils. They also may have their origin in all sorts of group activities and associations, such as a playground, games, boy scouts, and bluebirds. They are continually being strengthened or reshaped by experience within and outside the class. They are rarely developed well by continued "preaching."

4. ACQUISITION OF TASTES AND INTERESTS

Whether or not one is educated is as much a matter of what tastes and interests one has acquired as what one knows, if not indeed more so. The truly successful teacher is one who not only can assist learners to acquire a considerable degree of mastery of the subjects taught, but who leaves his students with a desire to learn more and with abiding interests which will cause them to continue to learn and to engage in activities based upon what has already been learned.

Opportunities for Developing Tastes.—The master teacher is always conscious of the importance of guiding learners in the acquisition of desirable tastes and interests and always watching for opportunities to contribute to their development. The superior teacher of elementary school science, for example, utilizes the available opportunities to develop interests in various fields of her subject, in procedures, in discoveries, in unsolved problems, in scientific movements, and in the pioneers and great men of science.

The superior teacher of social studies leaves her class with interests in new developments in government; in group approaches to the solution of problems of living; the people of other countries and our relationships with them; and current local, state, national, and international problems.

The superior teacher of English strives to develop not only a taste for and interest in good reading in general, but also an urge to understand the relationships between literature and life, in human nature, social and psychological behavior, and human emotions and customs.

Teachers of art and music have always had as a most important objective the development of interests in and tastes for reasonably good art and music, though teachers may properly attribute their ineptness in attaining such objectives to their emphasis upon information and skills, a weakness shared by many teachers of literature.

Procedures in Developing Tastes.—Individual tastes and interests have their origin in meaningful experience. Initial experiences do not always breed tastes and interests; indeed, often there is at first a slight distaste and lack of interest sometimes amounting to boredom. This constitutes a challenge to skilful teaching. Continued contact with ideals under favorable circumstances will, though in a minority of cases, beget interest.

The most effective teachers are neither discouraged nor irritated by evidence of initial dislike or lack of interest and are not too much encouraged by immediate interest or what apparently is the quick development of taste. Continuing development of worthy interests is dependent to a large degree upon the teaching.

The master teacher also recognizes and makes appropriate provision for the fact that tastes and interests are individual matters. Not all children can be expected to be, nor is it desirable for all to be, interested in the same thing and possessed of the same tastes. The important consideration is that each child increases the keenness of his interests and tastes for better things.

Much teaching is of the type sometimes referred to as "appreciation teaching." It involves not only the development of tastes and interests and frequently of ideals and attitudes, but also the information, understandings, and skills involved in analysis and evaluation. Since it involves the development of all these outcomes, the successful appreciation "lesson" is in practice a combination of several of the principles and techniques for developing all those various types of outcomes.

Following are suggestions which may prove useful to teachers in teaching for development of tastes. Most of them apply with appropriate modification of wording to the development of ideals, interests, and attitudes.

1. Employ subject matter appropriate to the age and maturity of the pupils. Developing taste is a slow process, and the level of subject matter cannot with success be elevated abruptly. Subject matter beneath the level of development of the child is likewise ineffective.
2. The teacher should show some enthusiasm for the material. She should not be effusive or gushing, but sincerely appreciative.
3. Care should be taken to avoid overanalysis. The mechanical dissection of a beautiful piece of literature is not likely to arouse the desired appreciation.
4. Do not force the student to express his reaction. While opportunity should be provided for spontaneous expression, and while

- such expression should be mildly and judiciously commended, no pressure should be brought to bear. A premature expression, especially if forced, is likely to be unfavorable or hypocritical. It must be remembered that the better tastes develop slowly.
5. Do not attempt to standardize results in developing appreciations. Tastes differ, and they develop unevenly. Wide individual differences must be expected, and these will require patience and careful procedure.
 6. Students should not be talked into "appreciation." Appreciation should grow out of direct experience. A pupil should be led to discover points of beauty or enjoyment and should not have these thrust upon him.
 7. The pupil's possession of productive technique may enhance appreciation, and usually does, but compulsory training in productive technique may develop attitudes which will hinder the development of the desired attitudes or interests.
 8. Ideals are best acquired in the concrete. Performance, even if fictitious or imaginary, is superior to abstract concepts.
 9. Care must be taken to prevent digression or distraction which will arouse conflicting or incongruous feeling-states.
 10. Care should be taken to keep in the background the teacher's intention to develop appreciation.
 11. Appreciation of thought should not be sacrificed to appreciation of form; the former is spiritual, the latter sensual.
 12. Newly found interests and tastes should be cautiously directed into satisfying activities. Care must be taken, however, not to force these. Haste never made waste more certainly.
 13. If after a fair "exposure" the material used does not bid fair to arouse favorable attitudes, persistence may not avail anything. A change of diet may serve much better.
 14. As far as possible, the student should find esthetic or moral values himself. Ideals are naturally discovered; they are rarely taught. Moralizing is ordinarily unwise and to be avoided.

5. CONCOMITANT OUTCOMES

Every teacher knows that when she is teaching for certain objectives, to produce certain outcomes of teaching, the effects upon the pupil and his educational growth are never confined to effects relative to the objectives and outcomes sought. The incidental or by-product effects or outcomes are commonly rather important, frequently more important than the outcomes intended.

This is a matter of prime importance in connection with the incidental effects of types of motivation of learners. As was pointed out more fully in Chapter 4, teachers who induce their students to engage

in learning activities in such a manner as to develop unfavorable attitudes "kill the goose that lays the golden eggs." Such a procedure is clearly one that obtains an immediate and often ephemeral educational growth at the expense of forever stunting or preventing a greater growth through the years to come.

A multitude of ideals, attitudes, interests, tastes, general ideas, and information are in the process of growth, or ready to be stimulated, at all times. The teacher is often unconscious of the effects of teaching and learning activities in regard to these outcomes. Care must be taken to keep to a minimum such concomitant outcomes as :

1. Development of misunderstandings, misconceptions, and false impressions
2. Development of unfavorable attitudes toward subjects, persons, ideas, or practices, attitudes which are either unfair, uncalled for, or not to the interest of the learner or of society, e.g., an attitude of hostility toward all Russians, superiority toward all Chinese, or resentment toward constituted authority
3. Destruction of potential or existing interests in any field of thought and study or any worth-while activity
4. Development of unworthy tastes, e.g., for cheap literature, movies, or recreational activities
5. Development of indifference toward thrift, the feelings of others, responsibility for the general welfare, good speech, or good manners
6. Development of rivalry, selfishness, self-centeredness, superiority, inferiority, dislike of teacher and school, etc.

Merely because it is difficult to measure adequately pupil growth in ideals and interests, the teacher should not permit herself to underestimate the importance of these types of educational outcomes. The fact that they are not objectives peculiar to the particular field or subject taught by a given teacher should not cause her to shelve responsibility for contributing her share to the development of important outcomes.

QUESTIONS, PROBLEMS, AND EXERCISES

1. What is the difference between "knowing" a specific fact and knowing its meaning--between learning a specific fact and learning its meaning?
2. Which is more important: our knowledge or our interests and attitudes? knowledge or conduct? habits or skills?
3. What is a concept? Mention three. Give some suggestions for leading young persons to acquire a given concept.

4. Select some school subject (e.g., science). Mention several developmental methods commonly employed in it; several authoritative methods.
5. Be able to discuss in class "Teaching for understanding," mentioning its importance and its methods as applied to some one school subject or field with which you are familiar.
6. Select a school subject and mention four to six skills to the development of which that subject should contribute.
7. What are the most important principles to observe in developing a skill? a habit?
8. Select a school subject and mention four to six ideals or attitudes to the development of which that subject should contribute.
9. What are the most important precepts for teachers regarding the development of desirable ideals and attitudes?
10. Select a school subject and be able to tell what tastes or interests the subject should contribute.
11. Mention several very important general or concomitant outcomes to the development of which every teacher and every subject should contribute.
12. Which types of outcomes are usually overemphasized and which ones underemphasized and why?

4. Select some school subject (e.g., science). Mention several developmental methods commonly employed in it; several authoritative methods.
5. Be able to discuss in class "Teaching for understanding," mentioning its importance and its methods as applied to some one school subject or field with which you are familiar.
6. Select a school subject and mention four to six skills to the development of which that subject should contribute.
7. What are the most important principles to observe in developing a skill? a habit?
8. Select a school subject and mention four to six ideals or attitudes to the development of which that subject should contribute.
9. What are the most important precepts for teachers regarding the development of desirable ideals and attitudes?
10. Select a school subject and be able to tell what tastes or interests the subject should contribute.
11. Mention several very important general or concomitant outcomes to the development of which every teacher and every subject should contribute.
12. Which types of outcomes are usually overemphasized and which ones underemphasized and why?

Chapter 6

PERSONAL AND SOCIAL ADJUSTMENT OF PUPILS

One of the most important outcomes of a program of elementary education is the personal and social adjustment of pupils. Inasmuch as the causes of maladjustment often occur in the early years of a child's life the symptoms should be identified and a program of correction should be initiated in the elementary school. If the causes are not removed until the child becomes an adolescent or adult, the problems of maladjustment become increasingly difficult of solution. A constructive program is especially needed in the lower elementary grades to prevent the child from becoming confused and frustrated as he transfers many of his activities from the home to the school situation. Pupil misbehavior should be recognized as a symptom of the disorganization of organic and environmental factors which are basic to satisfactory personality development.

Discipline in the elementary school seeks to assist each pupil to develop the abilities, attitudes, and habits essential to an ever-increasing, intelligent self-direction. In this connection the teacher has the responsibility of arranging opportunities for the pupil to acquire sound personal values and social adequacy through participation in his own play and work group. The factors which prevent effective learning also operate to hinder personal and social adjustment. Thus the establishment and maintenance of a school environment which stimulates and promotes effective learning also contributes to the pupil's personality development. A child's success or failure in one aspect of his total personality growth affects his development in all other aspects. The difficulties encountered by a child in his relationships with other pupils and his teachers may appear to grow out of his general dissatisfaction with school. A superficial analysis of the problem may lead to the conclusion that a causal relationship exists when actually the causes of his difficulties in the two areas may stem from the same set of conditions.

Many of the errors in disciplinary procedures in our schools can be traced to the teacher's lack of understanding of the fundamental relationships between effective learning, good citizenship, and per-

sonality development. In her efforts to assist pupils in making satisfactory personal and social adjustments, it is essential that the teacher:

1. Possess clear insights into the psychological and sociological concepts of rational human behavior.
2. Be aware of the implications of school discipline for individual character development, democratic living, as well as success in teaching.
3. Perceive the interaction of environmental and organic factors in personality development.
4. Recognize the necessity of studying children as individuals and as members of groups to discover clues to each pupil's concerns, needs, interests, and behavior patterns.
5. Possess sound techniques of studying children.
6. Acquire the skill and artistry to assist children in finding their own solutions to problems in the area of personality development.

Most teachers who are genuinely interested in helping children to become happy, well-adjusted individuals can acquire the necessary understandings and skills by diligent study. In the subsequent sections of this chapter, consideration will be given to a few of the more important concepts and procedures of school discipline as a process of pupil personality growth.

1. BASIC CONCEPTS OF HUMAN BEHAVIOR

In a democracy rational human behavior is the result of an individual's experiences in making choices among various alternatives with consideration of the probable consequences for himself and others. Acquiring rational behavior, like other types of learning, must be accompanied by satisfactions with right responses and annoyance at incorrect ones. The type of activities from which a child derives his satisfactions is an important consideration in guiding his behavior. The individual who finds his greatest satisfaction from self-centered activities displays a lack of social maturity. In ascending order of worthiness may be mentioned the satisfaction derived from one's loyalty to an individual, loyalty to a group, and loyalty to an ideal of human welfare, such as justice, tolerance, or sympathy for the underprivileged.

Behavior patterns are acquired as component parts of total learning situations rather than in isolation. An individual's conduct cannot be judged apart from his social environment. Discipline, instruction, and other environmental factors are mutually interactive.

Before an individual pupil's behavior is condemned too harshly, the causative factors in the "social climate" and the standards of the group should be analyzed.

Acquiring Proper Patterns of Behavior Involves Self-Activity on the Part of the Learner.—The teacher should be concerned with the sum total of temperament, outlook, and habitual choice which we call personality. Personality is not entirely the product of forces outside the self. It is the resultant of the reciprocal action of the self and environmental factors.

Children should be given the tools of analysis and synthesis and provided with criteria for judgment with reference to conduct just as they are given a basis for evaluating the merit of a selection in literature. Growth in proper behavior must be based upon insights and understandings of how individuals may become better judges of good and evil. Good conduct does not result from mere drill on the accepted ways of the crowd. Intelligence is a necessary ingredient of morals.

Individual Diagnosis and Treatment.—The many sources of pupil misbehavior and maladjustment make an understanding of the individual child necessary in the establishment of proper behavior patterns. In diagnosing child behavior the teacher should recognize the part that emotional factors play in determining human conduct. Many of the important decisions made by individuals, particularly the more immature, are largely on an emotional basis. It has been said that "intelligence is a mere speck floating on a vast ocean of emotion." The function of education is to lead the child toward greater mental maturity and thereby to assist him in making more of his decisions on a rational basis. However, one who takes a realistic view of human behavior cannot fail to recognize the critical importance of the impact of the emotions upon conduct.

Habits of Correct Behavior Require Practice.—Practice is necessary in situations in which errors can be gradually eliminated. It is no more reasonable to assume that errors in behavior may be avoided or eliminated by verbal instruction alone than is the case with errors in English usage. Only as numerous opportunities are presented for correct performance, accompanied by clear understanding of meanings, does the individual learn better ways of action. Errors in conduct cannot be blotted out by edict or by intellectual means alone any more readily than can errors in spelling or arithmetical computation. Practice should be continuous to the extent that acceptable behavior be-

comes more or less automatic. The good citizen does not have to deliberate in every situation the advisability of proper conduct.

Docility, Conformity, and Unquestioning Acceptance of Authority Do Not Constitute Discipline.—Only when the individual understands the implications of his acts do they become significant for his character development. The negative approach in which the teacher acts as a mere censor of surface manners is not conducive to the individual pupil's growth in accepting moral responsibility for his acts. The teacher who plays the role of critic rather than that of a stimulator to right behavior becomes a mere symbol of a system of external controls. The teacher who wins the reputation among pupils of *protesting too much* encounters difficulty in becoming a positive force in the character development of adolescents.

Learning to behave properly is among the most complex of all learnings. It is achieved only by constant effort in intelligent choosing and acting. Children need guidance, not dictation, in establishing habits of good conduct. The teacher who attempts to become a fire extinguisher of flaming youth may discover that he has caused the flame to smolder temporarily only to break out later in greater intensity. The long-term effect of any form of disciplinary control is the best measure of its effectiveness.

Human Freedom Is More Than the Mere Removal of Restraints.—Freedom is achieved only when the individual is able to use his freedom from external restraints in an intelligent, positive manner. If the teacher is to assist the pupil in achieving the "good life," he must recognize that the good man is not one who merely observes the rule, "Thou shalt not." The positive aspects of living in freedom must be emphasized. Unless the man freed from restraints develops the resources within himself to establish a satisfactory independent existence, he identifies himself with authority in the form of a person or institution, thereby submerging his freedom. The Germans after World War I constituted a good illustration of a people who lacked the inner resources necessary for freedom; they turned to Hitlerism.

2. SIGNIFICANCE OF SCHOOL DISCIPLINE

Implications for Democratic Living.—The existence of a democratic society is dependent upon self-disciplined citizens who act with proper consideration of the social welfare. Education thus becomes more than a process of growth. It is growth in the direction of social intelligence and behavior. The main problems of this generation are

social in nature. Despite his progress in technological matters, man has yet to learn how to live wisely and well with his fellows. In fact, the mechanization of industry has created numerous new social and economic problems. The resolution of these issues is dependent upon more than the acquisition of knowledge and skills. It involves the development of attitudes and procedures which promote social living.

By its very nature the school is both an educational and a social agency. Social tendencies emerge. In this stage of an individual's development social habits are established. Prior to a child's entrance into school the source of disciplinary control is largely the child's loyalty to parents. In his efforts to become an accepted and acceptable member of a social group, his behavior patterns based upon loyalties to individuals are broadened to include group control and restraints. The responsibility of the teacher is therefore to assist the child in adapting his behavior to group activities and also to create a social climate in the school conducive to proper individual and group behavior. In this connection one of the chief purposes of discipline in the school emerges, namely that of providing conditions which will promote the development in each pupil of the qualities and habits which make for self-control and good citizenship.

Implications for Individual Development.—The social objective of discipline fortunately is not in conflict with the idea that "discipline of both the home and the school should recognize the dignity of each individual and his right to seek recognition and direct his own activities."¹ In democratic situations, the welfare of the individual and that of the group complement and reinforce each other.

Discipline, at its best, assists the individual in the establishment of desirable habits of life. Helping the child to solve his own behavior problems is synonymous with the development of good mental health. It is guidance in personal adjustment. Thus conceived, discipline must be based upon a recognition of the fundamental drives to human action. Among the most impelling of these are desire for personal recognition, desire for social approval, desire for new adventure, and desire for security. Properly directed, these tendencies become potent forces for right action. The child needs wise guidance in directing them into the right channels. It is stupid for the teacher to disregard or thwart them.

Every feature of the school environment leaves its impression for good or ill upon the child. The extent to which attitudes favorable to

¹ Warren R. Good, "Discipline: For Subservience?" *Current Viewpoints in Education*, p. 111

cooperation are developed by the pupil is dependent upon the success of the teacher in assisting the pupil to harmonize his personal wishes with his social environment. An environment in which confusion and disorder prevail does not bring out the best in an individual. On the other hand, situations characterized by order and decorum are conducive to the establishment of effective individual habits of study and work.

Discipline and Order in School.—The immediate objective of school discipline is to maintain effective work conditions. One who takes a realistic view of the school must recognize the necessity of a school environment which is conducive to constructive pupil endeavor. Stated in negative terms, it is difficult to establish effective habits of study in a situation characterized by disorderly, antisocial conduct.

Within recent years, many theorists have tended to underestimate the value of discipline in achieving this objective. This point of view represents a reaction to the abuses and errors of a system of pupil control based upon strict, unquestioning obedience to sets of formal rules and regulations in which the purpose of discipline was order for order's sake. An awareness of the evils inherent in arbitrary teacher authority does not justify taking the extreme position opposite, in which the teacher relinquishes his role as a responsible leader in children's activities. Positive, constructive leadership is not necessarily dictatorship. Children appreciate and profit by mature, intelligent teacher leadership in the maintenance of conditions which prevent confusion and a needless waste of time in their work.

Implications for Success in Teaching.—The ability to maintain good discipline has long been considered one of the chief measures of teaching competence. Parents and the general public evaluate the teacher's success largely on the basis of her skill in establishing and maintaining pupil morale. Superintendents and principals attribute more failures of teachers to failure in this area than to any other cause.

The emphasis placed upon this aspect of the teacher's work has caused many teachers to consider maintaining order as an end in itself, and thus to isolate and treat it as a separate problem. The evidence is conclusive, however, that effective teaching procedures are the surest guarantee of success in discipline. Good order and morale are natural concomitants of the teaching which provides pupils with significant, challenging problems along with facilities and freedom to attack these problems. In considering the relation of ability in discipline to teaching success, the teacher should avoid the error of

placing disciplinary practice on the low level of force and arbitrary authority rather than on the plane of social control and self-direction.

It is equally important that the teacher resist the temptation to sacrifice long-range abiding values of discipline for the alluring expediency of establishing a form of accepted disciplinary control and thus gaining popular approval.

These precautions should not be construed to mean that the teacher should be indifferent to the wishes of parents that the school assist their children in becoming disciplined citizens. The desired outcome is praiseworthy. In its attainment, however, the teacher has the responsibility of utilizing means which are psychologically and sociologically sound.

3. CONDITIONS INFLUENCING CHILD BEHAVIOR

The Social and Economic Status of the Child.—In order to understand and direct a child's behavior in an intelligent manner the teacher should recognize that individual behavior is in part the resultant of many forces in the local community, operating singly and in combination. Some of these forces are economic; others are rooted in the mores of the community, including the prevailing standards of conduct of adolescents and adults.

Particularly significant in their impact upon the thinking and the overt behavior of children are the standards of value held by the members of those with whom he comes in contact. If the criterion of success held by others is material affluence, the child who realizes that his family is not able to own an expensive automobile or live in the so-called fashionable section of the city may develop deep feelings of inferiority. Equally unfortunate is the snobbery of a child whose family can afford the things which large numbers of his associates do not possess. These inequalities are thrown into sharp relief in many small communities. While these communities may not have any extremely wealthy or very poor persons, the differences are nevertheless very real to the sensitive child who is desirous of recognition by the members of his own age group.

The idealistic outlook and the sense of fairness of children tend to cause them to ignore superficial differences and judge persons on the basis of their worth. However, if contrary attitudes are deep-seated in the community and especially if parents emphasize differences in wealth in their conversations with their children these ideas may be reflected in the behavior of elementary school pupils.

Where community adherence to wealth as a standard of personal

value exists in its extreme form, an individual's acceptance by various social organizations may be mainly on an economic basis. If by force of personality and the possession of qualities of leadership an individual is able to gain admittance into the so-called exclusive circles, he may still be confused in his thinking and handicapped in his activities.

Gangs also may be formed on the basis of financial or social standing of families. It is not uncommon for the "dead-end boys" or ostracized minority groups to clash in acts of violence with the sons of the elite. Students of juvenile delinquency among boys are convinced that the inability of many boys to have the things their associates possess is the source of many crimes against property.

The responsibility of the teacher is to assist pupils in the development of a sound set of values. There is need also for the schools to exercise leadership in the education of adult members of the community regarding what should constitute the basis of respect for human personality.

Physical Health and Development.—Studies of children enrolled in our schools reveal that at least one third of them are handicapped by serious defect or illness and that another third have minor defects. Intellectual, social, emotional, and physical traits are so intimately interrelated in their development that diagnosis and treatment of physical defects are essential in an education program. Many problems of learning and behavior can be traced directly to the child's physical handicaps. Feelings of physical inadequacy frequently result in social maladjustment and acts of overcompensation. This is especially true if the handicap is serious enough to prevent the child from participating in games and sports.

Many problems of discipline grow out of the restlessness of children resulting from the overactivity of certain endocrine glands. Malnutrition, poor vision, skin disorders, and defective hearing may contribute to unsatisfactory achievement and irritation with the school situation.

While the teacher cannot be expected to become an expert diagnostician of physical disease, she should be able to recognize the signs of malnutrition and of mental and physical fatigue as bases of irritability and other forms of maladjustment. She should also be alert to subnormal conditions of vision and hearing and refer these cases to competent medical authorities. Proper seating arrangements, adequate lighting, hot lunch programs, and health instruction represent a few of the most important things a school can provide in assuming its responsibility for the physical welfare of pupils.

Some Basic Personal Needs of Children.—Authorities have estimated that 60 per cent of discipline problems involve both individual case history and psychological structure of the group. Basic to an understanding of child behavior is a recognition of their basic needs. Every child needs to have feelings of security, belonging, and a growing sense of adequacy or success. Failure of the teacher to take these emotionally charged factors into consideration inhibits the development of satisfactory personality traits and effective learning on the part of children.

Feelings of security are developed in young children through expressions of affection, confidence, interest, and understanding by parents and teachers. The child who is continually thwarted acquires feelings of resentment against adults. He feels that he is helpless against what he believes unfair treatment of teachers and parents. Typical of this attitude is the expression, "Wait till I grow up; I'll show them." This feeling of injustice may cause the child to react to the teacher by surly withdrawal or open defiance. These attitudes can be changed in time by patience, kindness, and good will. On the other hand, if these feelings of injustice are allowed to remain, attitudes of ill will, envy, and bitterness toward other persons may characterize a person throughout his life.

Feelings of adequacy are developed as a result of the child's finding success in his school work. In planning pupil activities, the teacher should consider means by which each child can achieve a proper balance between success and failure. The teacher's understanding of each child's abilities, concerns, and needs is essential to planning such a program.

The blocking of voluntary action is recognized by psychiatrists as one of the conditions that result in emotional upsets. Failure in school blocks the learning process. Occasional failure is disturbing. Frequent failure is tragic. Repeated failure does irreparable damage to the child's personality. One of the most stupid acts of teachers is to require or expect the child to perform tasks he cannot do. School tasks which are too easy for the child are likewise detrimental. Resentment on the one hand and boredom on the other are natural responses of the child.

In her efforts to assist the child in adjusting to a situation in which he has not been successful, the teacher should avoid calling the child's attention to his difficulty by urging him to greater efforts, by pleading with him to "try hard," or by telling him that his parents are desirous that he succeed. The emotionally charged problem can

best be solved by assisting the child to analyze the difficulty and by providing some substitute stimulus to action in which he may have the satisfaction of success. The teacher should avoid making the failing child feel conspicuous before his classmates. The emotional disturbance is usually only one aspect of a total complex. Perhaps the greatest handicap to the nonreader is the complex which accompanies his deficiency.

Emotional blocks may also develop in school situations in which the child is subjected to rigid requirements of conduct or achievement. The examination and marking systems in use in many schools are detrimental to the development of feelings of self-confidence and security, both of which are essential to good mental health. The feelings of inadequacy developed by the domination of parents and perpetuated by the enforcement of arbitrary school standards often become the basis of useless fears which prevent the individual from ever achieving social and vocational efficiency. A sense of belonging results when the child has opportunity to share in making plans and participating in the activities of his own age group. A skilful teacher can direct the activities of a group of children to bring all of them into both small group and general group activity. The information obtained by a study of the sociograms of the class provides a basis for the teacher's understanding of the social structure of the group, including the social distances of the isolates from the socially accepted members of the group. Suggestions for pupil participation in planning classroom activities are given in Chapter 7 and methods of obtaining social participation in extra-class activities are given in Chapter 21.

Mental Ability and Pupil Behavior.—The type, frequency, and seriousness of disciplinary difficulties are often determined by the mental maturity of the individual. The child of low intelligence is susceptible to the suggestions of other persons without discriminating as to their efficacy. He may also encounter difficulty in seeing the implications of his behavior. The lower his level of intelligence, the less able he is to learn by his own experience or that of others. Many of the problems of discipline, however, arise among children of high intelligence. If the school situation fails to present a challenge for the bright child to exercise his mental abilities, boredom and restlessness may cause him to seek outlets for his powers in undesirable overt behavior. The maintenance of high standards of conduct is dependent, therefore, upon learning experiences of considerable variety and different degrees of difficulty which are appropriate to various levels and types of intelligence.

School Discipline Problems Related to the Home and Family.—

A child's behavior is greatly influenced by his home environment. The standards of conduct of his parents are usually reflected in the child's acceptance or rejection of their behavior patterns. The parents' desire to dominate the child's thinking or their willingness to emancipate him in this respect is an important factor in the pupil's ability to assume responsibility for his own behavior in school. Discord in the family resulting from differing opinions of the mother and father in regard to the severity or the methods of discipline often results in confused and inconsistent child behavior. Discord and bickering in the home, growing out of financial affairs and marital incompatibility, are conducive to emotional disturbances of the child.

The presence of a more talented brother or sister, or a "favorite" child in the home, may cause deep resentments on the part of the less favored child. These may take the form of indifference ("don't care" attitude) or one of shame and humiliation. The child who is a member of a foreign family or minority race which has been subjected to acts of discrimination in the community may encounter difficulty in making satisfactory adjustments to the school group. The child may become unduly sensitive to the normal reactions of other children to him by withdrawing or compensating activities.

Emotional tensions growing out of home conditions can frequently be alleviated by assisting the child in interpreting the situation in relation to the long-term factors in his development. Interviews with parents and discussions in parent-teacher association meetings of the problems of child behavior may be fruitful. Adult education courses for parents also present opportunities for discussion of the rearing of children.

Pupil Behavior Influenced by Community Conditions.—Assisting youth in becoming worthy members of society is a community-wide task. A test of the community's interest in the welfare of its youth is the extent to which effective steps have been taken to protect children from the following undesirable features of community life:²

1. Racial intolerance and animosity in the community which breed a contempt for the rights of others
2. Local industries which disregard child labor laws
3. Poor housing conditions and the existence of slum districts and marginal culture areas
4. Juvenile court officers who fail to recognize the special needs and problems of youth

² Charles Howell, "Community Score Card," *The Journal of The National Education Association*, Vol. 35, p. A-14.

5. Inadequate provision for wholesome community recreational facilities, which forces young people into futile inactivity or causes them to seek entertainment among surroundings of a questionable character
6. Motion picture theaters showing pictures undesirable for children
7. Shops which display and sell obscene literature
8. Taverns which sell intoxicating liquors to minors

As the chief child-serving agency of the community, the school should assume leadership in coordinating the efforts of civic, religious, and social service organizations for concerted action designed to promote the welfare of children. Teachers should avail themselves of every opportunity to arouse the community from the spirit of indifference to the needs of its youth and stimulate cooperation for concerted effective action in their behalf.

Discipline Problems Related to Leisure-Time Activities.—Many of the behavior problems of children have their origins in leisure-time activities. Recreational facilities are inadequate in many communities to meet the needs of children. Proper supervision of the activities also is often lacking. Perhaps the greatest deficiency of the typical American community is the lack of a well-organized, year-round recreational program for both in-school and out-of-school youth. Failure to make the recreational facilities of schools available in the evenings and on week ends is inexcusable.

Some of the difficulties in worthy use of leisure time may be attributed to the individual. The boy may exercise little discrimination in his choice of movies or other forms of entertainment. He may possess poor reading habits or have limited ability in sports. He may lack interest in worth-while hobbies. Extreme allegiance to the gang may become a prolific source of trouble.

The teacher has the responsibility to assist children in developing the abilities necessary for joyous participation in worthy activities. She should also guide youth in the judicious use of recreational facilities which are available in the local community. Camping experience should be provided for every child as a part of a well-rounded educational program. It is essential that the teacher acquire the ability to conduct interesting field excursions and camp activities in which pupils may participate. Recently the State of New York passed legislation making it possible for school districts to carry on organized camping as an integral part of the school curriculum.

Group Influences on Individual Child Behavior.—Only a small percentage of the problems of school discipline can be traced solely to

the individual pupil. His behavior is conditioned by the various groups of which he is a member. Low group morale is frequently the causative factor in the misbehavior of individuals. Study of the psychology of the school group may reveal many factors contributing to antisocial or unsocial conduct of individual pupils.

In an analysis of the structure of the school group, Sheviakov and Redl³ suggest six factors which may cause undesirable individual conduct. The following is an adaptation of their statement.

Factor I. *Dissatisfaction in the Work Process.* The subject matter may be too easy to challenge the abilities of the students, thereby causing them to seek other outlets. Frustration may result from subject matter so difficult that it produces student indifference or irritation. The assignments may be poorly planned in terms of difficulty or manner of presentation. Finally the activities may be largely or entirely on the verbal level, excluding employment of the motor manipulative tendencies of normal children.

Factor II. *Emotional Unrest in Interpersonal Relations.* Tensions growing out of strong friendships or animosities among pupils may supersede work interests. Competing cliques within a group may become sources of emotional disturbances. Clashes of personality between pupils and teachers often result in serious maladjustment of the pupil to his work and to the group.

Factor III. *Disturbances in Group Climate.* By the term *group climate* Sheviakov and Redl mean "the basic feeling tone which underlies the life of a group, the sum total of everybody's emotions toward each other, toward work and organization, toward the group as a unit and toward things outside." They give the following examples of different types of group climate:

A. Punitive Climate: One in which pupils are accepted or rejected on the basis of the teacher's behavior code. The children usually develop a hypocritical attitude toward each other or the teacher.

B. Emotional Blackmail Climate: In this situation the children develop a strong emotional dependence upon the teacher and there is strong rivalry between the children who conform and those who are not close to the teacher.

C. Hostile Competition Climate: In its extreme form everybody is whipped into ruthless competition with everybody else. The result of this atmosphere is extreme uncooperativeness among members of the group. The more successful students may develop feelings of superiority, while students who cannot meet the standards have feelings of shame or defeatism.

D. Group Pride Climate: Within proper limits this climate may be conducive to a wholesome feeling of "we-ness." In its extreme form feelings of group vanity and conceit may result. The individual who does not meet all the requirements of group loyalty may be made an outcast subject to group persecution.

³ George V. Sheviakov and Fritz Redl, *Discipline for Today's Children and Youth*, Association for Supervision and Curriculum Development, National Education Association, pp. 44-56.

Factor IV. *Mistakes in Organization and Group Leadership.* During the period of adolescence there is need for the gradual emancipation of the child from adult domination. Some of the features of the school organization which disregard this need of youth are (a) too much autocratic pressure; (b) too much organization, (c) group organization out of focus with the age, maturity, background, and special needs of the group.

Factor V. *Emotional Strain and Sudden Change.* A member of a group may become unduly excited about examinations, athletic contests, or community events. Boredom resulting from the failure of the teacher to provide exciting or interesting work is even more damaging to group morale. Sudden changes in behavior requirements, techniques, and leadership frequently result in emotional upsets of both individuals and the group.

Factor VI. *The Composition of the Group.* Frictions and discipline problems may develop unless children are grouped on the basis of criteria relevant to group life. Some of the considerations which are important in grouping pupils are age, physical and social development, home acceptance or emancipation, intelligence, knowledge, social-economic background

4. METHODS OF DISCIPLINE

Pupil Growth in Social Responsibility.—The social forces present within each school group can be utilized to give children actual experience in making decisions on a cooperative basis. Participation in the democratic process of accepting and sharing responsibility for the general welfare is basic to living in a democratic society. Each individual should fully recognize that his actions are not only significant to himself but that they affect the welfare of other members of a group.

In many areas of school life students may properly be given opportunities to make individual choices and assist in making group decisions. In many schools children make decisions under teacher guidance for carrying school tasks through to completion. They make decisions in regard to sources of information, study procedures, and methods of presentation and evaluation of their own activities. The main value of pupil participation in school affairs is that it provides opportunity for the pupils to make judgments of civic and moral values. The number of the decisions is of less significance than the manner in which they are made. The crux of the matter is that intelligent, democratic processes are utilized.

Pupil Participation in Management.⁴—Pupil cooperation and participation in management are based upon a concept of proper

⁴ See also pp 121-22 for discussion of pupil participation in planning of learning activities.

pupil-teacher relationship that is far removed from the authoritative-teacher role. However, the difference is one of degree and may not be as great as it appears. Pupil responsibility is a sham and pretense unless the teacher is thoroughly convinced that children are capable of developing a system of inner controls of behavior which is superior to any system of external controls that can be devised by teachers or parents.

Basic, therefore, to the effective operation of any plan of pupil participation is belief on the teacher's part in the ability of pupils to plan their own activities in an intelligent manner. The assumption on the part of pupils of such responsibility should be a gradual process, preceded and accompanied by careful guidance in procedure and evaluation of actual problems. Children resent the hypocrisy of make-believe problems. In some schools, children have assumed responsibility for self-direction. The following description⁵ reveals the decisions a fifth grade group made in regard to "timing" of their behavior in terms of its effects upon the group.

The fifth graders found that the things which cause them trouble were not really bad behavior but untimely behavior—mixing up the kinds of behavior that are appropriate for some other kinds of activity. They recognized that it is easy to become careless about these changes in purposes and suitable kinds of action when twenty-five persons are living together in the same classroom and using it for a variety of activities. "Cabin fever" can set in even in a modern classroom.

For example it was agreed that during work period some talking, even socializing, might not interfere with the accomplishment of the jobs to be done; that moving about is important for some kinds of jobs. The purposefulness of the talking and moving is easily recognized. By experimenting it was found, too, that it is possible to talk under noise instead of trying to talk louder than the noise of power machinery and other tools. Many children were rather surprised to find that they could control several different kinds of voices.

When work period is over and it is time for group planning a distinctly different situation is at hand. The children agreed that any talking not directed to the entire group is disturbing and untimely in terms of what the group is trying to accomplish. Here is an occasion for using a voice loud enough for everyone to be able to hear comfortably. Listening to and thinking about what is said are important so that each is prepared to help further the discussion, complete the plans, and be ready to follow through appropriate action with real understanding of what is to be accomplished.

⁵ *Toward Better Teaching*, 1949 Yearbook, Association for Supervision and Curriculum Development of the National Education Association, Washington, pp. 117-118.

When it is time to begin individual study it was agreed that getting materials ready quickly, taking off on their own jobs with the idea of getting them done in the allotted time, and allowing those around them to do likewise made a very different kind of situation. They expect "to feel the quiet" and not have unnecessary or inappropriate interests pulling at their attention. Reminders for those who violate the quiet are also part of the agreement.

Eating lunch in the same classroom makes necessary the getting ready for a still different situation. For this group it means a lunch committee of three setting tables and serving the lunch while the rest of the children move to chairs away from the tables for a free reading time. Most persons never have enough time for free reading so it is a welcome period in the day. The lunch committee can carry on their work with fewer hazards if it is understood that they are the only persons in circulation about the room. Conversation at table is an important and enjoyable part of the day. The agreements about it are that conversation not interfere with eating and that it be confined to the table at which they are eating rather than roomwide, for obvious reasons. The observation coming from the children gives it greater importance, however.

Common to all situations is the necessity for being considerate at all times of the other persons involved in any situation and for growing in the ability "to size up" a situation and to follow through with appropriate action. Needless to say, there are offenders. But the fact that the situations are recognized as the compelling factors in behavior instead of the teacher's establishing the demands from time to time shifts the emphasis from teacher domination to teacher guidance, guidance in recalling the agreements that make for effective, businesslike living in various group situations. When limitations are a matter of group recognition and agreement, they take on much greater importance.

Punishment Related to Pupil Adjustment.—In the preceding sections of this chapter, child behavior has been considered as the resultant of the interaction of the individual and his environment. Considerable emphasis has been placed upon the need for arranging and maintaining a social environment which is conducive to desirable behavior of the individual. It has been estimated that not more than 10 per cent of the disciplinary problems in schools can be attributed solely to the personal case history of the individual.

Pending the arrival of more nearly ideal conditions in home, school, and society, it is not realistic to expect that all forms of pupil maladjustment can be prevented. If an individual's overt behavior is detrimental to his own best interests and those of the school group, it is necessary that his behavior be adjusted directly and immediately. While the student's misconduct may have its origins in the general situation, the form of his behavior is usually specific and individual-

istic. It is, therefore, impossible to formulate a list of suggestions which a teacher may follow as a general prescription.

All pupils should not be disciplined in the same manner. The shy pupil must be treated kindly while the deliberately mischievous child may require more vigorous methods of control. There is need at times for placing restraints upon the activities of individuals and groups of children. The manner in which the restraints are imposed is especially significant. Under wise teacher leadership, groups can usually be depended upon to set their own restraints upon improper behavior in an intelligent way. In placing restraints upon the behavior of the young child, the teacher should remember that the child is required to accept without question the taboos of human behavior that have required centuries for civilized man to decide upon. There are a few basic considerations, however, which teachers may find helpful in preventing individual violations of good behavior. They are as follows:

1. Manifest a courteous, friendly attitude toward all pupils.
2. Guide each pupil into active participation in a committee, small group, or general class at least once during each phase of the work.
3. Establish friendly relationships with children by:
 - a. Talking freely with children.
 - b. Listening to the spontaneous comments children make and the ideas and opinions they express as they talk of in-school and out-of-school experiences.
 - c. Interpreting the stories they write and the pictures they draw in order to gain clues to their interests and needs.
4. With the help of the children, arrange the classroom favorably for work, giving particular attention to:
 - a. Grouping chairs and tables as activity demands or, if desks are fastened to floors, using same materials in same area of room.
 - b. Arranging the classroom for good group living.
5. Avoid extreme forms of:
 - a. Competition among students.
 - b. Pupil dependence upon teacher.
 - c. Group pride.
6. Use praise judiciously. When deserved, do not hesitate to make comments on written work and in presence of supervisor or principal.
7. Set standards of achievement in terms of the child's ability.
8. Accept suggestions of pupils made in group discussions for changes in the classroom situation.
9. Adapt curriculum to abilities and needs of individuals.

10. Utilize pupils' interests as point of departure in planning, managing, and appraising their activities.
11. Encourage pupil participation in planning pupil activities.
12. Avoid harshness, sarcasm, or nagging.

In dealing with violations, should they occur, the teacher should keep in mind the following :

1. *Slight irregularities of conduct* should not be taken too seriously. Strict and unwavering adherence to arbitrary standards of behavior without consideration of the intentions of the individual or the causative factors in the situation provoke feelings of resentment on the part of pupils. The teacher thus destroys his chance to assist the student in making a satisfactory adjustment.
2. Punishment is for the purpose of *assisting the individual* to make a more satisfactory adjustment to the school situation. The practice of making the punishment an example and a warning to other pupils is psychologically and ethically unsound.
3. Before any punishment is administered, *investigate the causes* of the individual's misbehavior. There may be possibilities of adjusting the curricular materials or modifying instructional procedures to make them more significant and challenging to the student.
4. In the event that the student's misbehavior appears to be related to his failure to adjust to the regulations imposed by the school organization, *consider the need of modification of the organization* in terms of whether it promotes or hinders the mental health of pupils.
5. In considering possible courses of action, select the treatment or form of punishment which appears to have the *greatest long-range value* in preventing recurrence of the individual's behavior.
6. The enforcement of rules against inattention, whispering, and the like is a poor substitute for *classroom situations that are vital and interesting* to students.
7. Be certain that, in punishing the individual, he is not being made the victim of a *generally unsatisfactory group attitude*.
8. The *monotony of one type of classroom procedure* should be avoided. Different topics present opportunities for utilizing a variety of teaching methods.
9. The severity and the form of punishment should be in terms of the *seriousness of the offense* and also with due recognition of the *needs of the offender*.
10. *The immediacy of the punishment* is important in assisting the child to establish the proper connection between misbehavior and punishment. However, a careful consideration of the causes and

consequences of the misbehavior prior to the punishment is essential.

11. Punishment on the installment plan is usually undesirable. Once a difficulty has been adjusted satisfactorily, *avoid referring to the matter again.*
12. *Do not hold grudges* against pupils. The mental health of the child is not promoted by his belief that "the teacher has it in for me."
13. *Get all the facts* relevant to the incident of misbehavior before disciplinary action is taken.
14. The teacher should *accept the facts* in a case of misbehavior and make the decision as to the best course of action without the demonstration of anger, irritation, etc.
15. *Publicity should not be given* to a student's misbehavior. The information about the incident should be used in a confidential professional manner.
16. *Methods of discipline should be consistent* within a given classroom, and also from one classroom to another.
17. A deterrent to pupil misbehavior lies in the *effective handling of classroom routine*—checking pupil attendance, collecting and distributing papers, and arranging instructional materials for prompt and expedient use.
18. *Alertness on the part of the teacher* in regard to what is happening in the classroom at all times is essential. Eyes that see and ears that hear what is transpiring prevent incipient misbehavior from becoming serious disaffection.
19. The possibility of pupil inattention in the group discussions and recitations is greatly minimized if the recitation is truly a *clearing house for ideas*. A repetition of ideas with which pupils are already familiar is not conducive to genuine interest. When pupils cannot hear the pupil who is reciting because of the poor seating arrangement of the class or because of his failure to speak in audible tones, they have a tendency to lapse into habits of inattention and indifference.
20. Pupils who are given a part in *planning, conducting, and appraising* their classroom activities, their club meetings, and their dances and parties have less inclination and time for misconduct.
21. Announcing in advance what will happen in the event of pupil misbehavior (*threatening*) precludes the possibility of treatment in terms of the needs of the offender. The causative factors are also ignored.
22. *Punishment of individual violations* of good behavior should be the rule, not punishment of the entire group.
23. *Avoid attributing misbehavior to an individual* until you are certain that he committed the offense.

24. The form and method of punishment should be such as to *enable the individual to retain his self-respect*. The pupil's belief in his own integrity is basic to any effort of constructive self-improvement. Treatment of misconduct should seek to *inspire the pupil to right action* rather than merely to restrain him from misconduct.

Character-building Agencies That Cooperate with the School.—

In addition to the school, there are various agencies in the community which have character development of youth as one of their main objectives. Especially active in this respect are the Boy Scouts, Cubs (junior group of Boy Scouts), Camp Fire Girls, Brownies (junior organization of Girl Scouts), Bluebirds (junior organization of Camp Fire Girls), Hi-Y, Friendly Indians (junior organization of Hi-Y), 4-H Clubs, and Junior Red Cross.

With resourceful leadership these agencies exercise a wholesome influence on the youth who participate in their activities. The informality of the programs makes a strong appeal to children. In the performance of many tasks in their meetings and camps, the youngsters are presented opportunities to participate in cooperative social endeavor. Children who are inclined to be irresponsible and thoughtless of others learn to respond to the needs of the group. The individual discovers that it is frequently necessary to subordinate his personal desires for the welfare of the group. In the performance of tasks for the general welfare, the youngster develops a sense of belonging and feelings of security and personal worth—he gains the feeling that he counts in the scheme of things.

The tone and quality of the activities are largely dependent upon the leader. Many teachers welcome the opportunity to serve as leaders in these organizations. They gain insights into the thinking and behavior of youth which are difficult to attain in the school situation. All the leaders of these organizations, however, should not be teachers. Children need the experience of coming into contact with leaders from various walks of life, with different attitudes and outlooks. Every teacher, moreover, can encourage children to become members of some one of these organizations, and he can cooperate with their leaders in making the programs of each organization more vital in meeting the needs of youth.

QUESTIONS, PROBLEMS, AND EXERCISES

1. To what extent can children assume responsibility in an intelligent manner for their own behavior?

2. What is the relation of classroom routine to discipline?
3. Defend or refute this statement: "The fundamental reason why children do not act right is because they do not have the conditions for right action." —Francis W. Parker.
4. What contribution can the mental hygienist make to the solution of problems of pupil maladjustment?
5. What are the implications for discipline in the view of some psychologists that human behavior patterns are specific rather than general?
6. Outline a plan of obtaining information in regard to a pupil whose behavior makes him a problem (i.e., plan a case study).
7. Given a classroom situation, how would you judge the effectiveness of the teacher's methods of discipline?
8. To what extent do problems of classroom discipline have their origins in out-of-school situations? in the total school situation?
9. List types of misbehavior for which responsibility may be attributed to the individual pupil.
10. Do you consider the ability to maintain good discipline a valid criterion of teacher efficiency? Justify your answer.

Chapter 7

PLANNING FOR TEACHING

1. THE IMPORTANCE OF PLANNING

Reasons for Planning for Teaching.—Teaching is one of the most complex and significant of human endeavors. It is complex because of the many intangible values and numerous human factors involved. Its significance lies in its power to shape human destiny for good or ill. No teacher who is mindful of the trust placed in her can be content with anything less than excellence in her work. Although perfection in teaching is achieved by few teachers, it is an ideal worth seeking. It is doubtful that any teacher ever failed to become a better teacher by planning her teaching in advance. It is likewise doubtful that impromptu thought and action ever resulted in peak teaching performance.

Planning:

1. Gives the teacher a clearer comprehension of the objectives of elementary education and the relationship of her teaching to those objectives.
2. Helps the teacher clarify her thinking about the distinctive contribution her teaching subject makes to the objectives of education.
3. Tends to insure that the relative values of various instructional materials and procedures are given proper consideration.
4. Serves to make the teacher more resourceful in recognizing pupils' needs, utilizing pupils' interests, and providing more satisfactory means of pupil motivation.
5. Reduces the amount of trial and error in teaching through a better organization of curricular materials, use of more appropriate methods, and greater economy of time.
6. Wins respect of pupils. They appreciate the teacher who is a learner with them and makes preparation for her work as she expects them to do.
7. Presents one of the teacher's best opportunities for continuous personal and professional growth.
8. Contributes to the teacher's feeling of self-confidence and self-assurance.

9. Aids the teacher in recapturing waning enthusiasms, thereby insuring a fresh, up-to-date presentation of instructional materials.

Why Planning Is Neglected.—Surveys have revealed that the majority of teachers in elementary schools have accepted instructional planning as a prerequisite to effective teaching. More amazing, however, is the disclosure that all school teachers do not recognize the need for planning. The confusion and doubt in regard to planning which seem to exist among many teachers and its outright rejection by others can be traced to the following causes :

1. The formality of planning, resulting from acceptance of the five formal steps in teaching suggested by Herbart. Teacher-training institutions formerly insisted that written lesson plans be organized in terms of the Herbartian teaching formula. It has been difficult to dispel that influence, even though the concept of the teacher as a mere manipulator of subject matter has been superseded by the idea that the child is the focal point in teaching.
2. The overemphasis upon the form of the lesson plan, resulting in little or no flexibility in use.
3. The requirement that lesson plans be made according to certain specifications in order to serve the purposes of supervisors in checking up on the work of the teacher.
4. The heavy teaching schedule of many teachers, which leaves little or no time for any but superficial planning.
5. The apparent success of planless teaching. Many teachers have achieved a fair degree of success, as teaching is measured, without planning.
6. The willingness of many teachers to follow the line of least resistance and thus accept mediocrity.

In view of these considerations, it is to the eternal credit of thousands of conscientious teachers that they have devoted so much of their time and energies to planning their teaching.

2. TYPES OF PLANS

Instructional plans may be classified in several different ways. One basis for classification of plans is their scope. Another method considers the persons doing the planning.

Scope of Planning.—The scope of adequate planning is as broad as the work of the teacher. Every aspect of his work requires thought-

ful consideration in advance. Broadly conceived, planning involves the curriculum, guidance, extracurricular activities, pupil appraisal, and methods of procedure. The discussion in this chapter will be limited to classroom procedures.

Persons Participating in Planning.—On this basis planning may be classified as (1) group planning with other teachers, (2) pupil-teacher planning, and (3) individual teacher planning.

One of the most significant trends in teaching in the elementary school is *cooperative planning* of activities by the teachers. In many schools the need has been recognized for preparing "resource units" as advance guides. The pooled judgments of a great many teachers, principals, supervisors, and curriculum workers are used to build a "frame of reference" for the individual teacher's use in teaching a unit. The resource unit, which should be distinguished from the teaching unit of the individual teacher, is merely suggestive in content and arrangement. It constitutes an outline of the broad scope of the unit prepared on the basis of the combined judgment of a group of teachers, supervisors, and the director of instruction in the schools. The chief features of a resource unit prepared for use in the elementary schools of Manitowoc, Wisconsin¹ are as follows:

- I. Unit problem
- II. Significance of the problem in terms of general living
- III. Understandings (to be developed)
- IV. Content outline
- V. Activities (pupils)
- VI. Evaluation. The Committee recommends that the group culminate this unit in one of the following ways:
 1. Make a scrap book of the various industries
 2. Give floor talks
 3. Have an exhibit of the products
 4. Have a program telling the interesting facts learned
- VII. Materials of instruction
 1. Teachers' references
 2. Films
 3. Community resources—local persons visit school and tell about their work

Cooperative planning by teachers not only serves the purpose of providing blueprints of a general character for the use of the individual teacher but affords also a valuable experience in mutual professional

¹ Social Studies, Third Grade Unit 1, "Manitowoc's Contribution to Other Communities." Public Schools, Manitowoc, Wisconsin, 1948.

endeavor. Under the supervision of a competent director of instruction, group planning can serve as an effective means of in-service education of teachers.

Pupil Participation in Planning.—Another noteworthy development in modern elementary education has been the inclusion of the interests and preferences of children in the teacher's plans for teaching. The acceptance of the idea that the learner should be taken into account has been difficult for many teachers. The theory that the child is immature and therefore not capable of participating in the making of important decisions, even though the decisions affect him directly, appears unsound in the light of our present knowledge of child psychology. Likewise untenable is the narrow concept of democracy upon which many school practices have been based. Democracy implies the opportunity for making choices and assuming responsibility for the results of these choices. It is essential that the teacher have a functional respect for the personality of the child. The teacher should also have a strong faith in the power of education to make desirable changes in the thoughts and actions of the individual.

The most convincing evidence, however, in regard to the advisability of pupil participation in planning various school activities comes from schools in which the practice has been put into effect. Pupils have demonstrated their ability and willingness to assume intelligent responsibility for their own acts. Pupil morale has been enhanced. Problems of pupil control have greatly decreased, and conditions for satisfactory learning have been established. The teacher who encountered difficulty in leading pupils to accept her purposes as worthy has discovered that shared pupil-teacher purposing is an open sesame to success.

The cooperation of pupils in planning activities may be used in practically every aspect of the life of the school. In matters pertaining to school citizenship, the curriculum, social activities, and classroom procedure, the pupils' active participation has been utilized. In instructional procedures involving the project method, pupils have participated in setting up objectives of the unit, selecting topics for study, choosing curricular materials, making decisions in regard to the methods of study, selecting the manner of presentation of the findings of their study, and evaluating the success of their various activities in connection with the unit.

The leadership of the teacher is essential in guiding these activities into desirable channels but not dictating to the pupils. Many teachers have exercised this guidance function by suggesting lists of activities

or readings from which pupils make choices. Other teachers have encouraged pupils to suggest their own lists of activities. A combination of these two procedures by cooperative pupil-teacher planning as the work proceeds is perhaps the best plan.

3. PLANNING THE WORK OF THE SCHOOL TERM OR YEAR

Adequate planning by the teacher involves consideration of the scope and variety of learning experiences which a class should have during a school term or year. Many of the decisions made in long-term planning should be tentative and subject to modification as the immediate needs of the pupils become increasingly evident.

Long-term planning involves decisions in regard to :

1. The scope of the educative activities of the pupils during the year
2. The selection and organization of the learning experiences (curricular materials)
3. The appropriate grade placement of curricular materials in terms of the maturation of the pupils in the class

The past experiences, achievements, abilities, concerns, and needs of the children should serve as guides in the selection of curricular materials. Findings of curriculum research as well as current practice in some of the better school systems may also provide clues to appropriate materials to be included in the work of children in a given grade.

Courses of study may provide helpful suggestions in regard to the scope of the curriculum for a given age group of pupils. Modern educational philosophy suggests the need for a great variety of pupil activities and curricular materials which are blended and fused together into a series of educative experiences. A firsthand study of the life concerns and needs of the class is essential in indicating a point of departure as well as the direction the work of the year should take.

In long-term planning the teacher should :

1. Establish objectives in terms of changes in pupil behavior
2. Understand clearly the part that achieving a particular objective plays in the intellectual, emotional, and physical development of the child.
3. Make a careful inventory of the mental, social, and physical qualifications each child in the group possesses for the experience.
4. Anticipate the probable difficulties which may be encountered, noting well the bypaths which may lead to futility of effort.
5. Select the materials and activities which make the optimum contribution to the attainment of the goal.
6. Organize these materials in a manner calculated to obtain the

greatest possible amount of interaction between all learners and the features of the changing environment along the journey toward the goal.

7. Consider plans for pupil-teacher measurement (evaluation) of the group's progress toward the goals.

If the work of the year is synonymous with the subject-matter fields, the task of planning the organization and presentation of a body of familiar material is comparatively simple. The first step in planning a course involves a decision in regard to the objectives to be achieved. This should be followed by a consideration of the scope of the activities in terms of the objectives. The third step consists of organizing the learning experience around significant problems or into units of child interest. The approximate time allotment for each of the units should be made in terms of its relative value in attaining the objectives of the course. Finally, general plans should be made in regard to the methods of teaching each of the units. Basic to all these decisions is a consideration of the needs, interests, and abilities of the pupils who are to be taught. Less important, perhaps, but deserving of consideration in formulating the long-term plan, are the inventories of available equipment, supplementary reading materials, and opportunities for guided field trips to obtain firsthand information on each of the units.

4. PLANNING UNITS OF INSTRUCTION

The unit plan of organizing instructional materials does not necessarily involve the use of the unit method in teaching the unit. The materials may be organized into subject-matter units and presented to the class as a series of daily recitations. However, the utilization of the unit method in teaching the unit is advisable. The experience type of unit, which represents a more significant reorganization of instructional materials, makes the unit method of teaching imperative.

The following suggestions for planning a unit were formulated by a group of teachers and supervisors in the Denver Public Schools:²

A. The teacher does some preplanning.

The teacher and children will make plans together for carrying on and evaluating the unit which has been selected; but, before approaching these planning situations with the children, the teacher will consult many sources of help and explore possibilities for developing the unit. Having thought

² *Planning and Developing A Life-Experience Unit*. Prepared under the direction of Maurice R. Ahrens, Director of Department of Instruction, Denver Public Schools, 1948, pp. 13-31.

through the problems, objectives, and activities involved, she will feel free to let the children express their ideas. Through his background she will be able to supplement their suggestions, broaden their vistas, and help them to set up problems and goals in terms which have meaning to them. The teacher will understand that this preparation on her part is not for the purpose of determining plans for the class but rather is to serve as a background and reservoir of ideas which will assist the class to identify in the unit every problem which may be of concern to the children.

1. She anticipates problems.

During discussions while the children have been agreeing upon their unit of work, they have made comments, expressed ideas, and raised questions. The teacher has noted these and jotted down significant ones. She now examines them to determine special problems which will be of immediate concern to her children. From her own background of knowledge and experience she identifies additional problems which she will suggest for consideration. As an illustration, toys and games which the children bring in to show and to play with just after Christmas may stimulate a general interest in how toys work. The teacher has watched and listened to the children as they examined and played with the toys and equipment. They have discussed the possibility of basing a unit of work on this interest, and have agreed upon it. The teacher will now in her preplanning think through their spontaneous questions and comments and find that they group themselves around such specific problems as ways in which mechanical toys work; ways in which other toys operate through balance, friction, rolling, and so forth; why some toys are self-propelling and others have to be pushed, pulled, and manipulated in various ways; the part that toys play in the everyday life of a child; how all persons, children and grownups, are helped by playing; how toys help us to learn; and why we share toys with others. The teacher will think through such problems in terms of the questions which the children may ask and those which he will suggest for consideration. The teacher should keep in mind the maturity level of the group and should not try to cover all possibilities for learning in this one experience.

2. She identifies objectives and considers ways in which she may evaluate behavior change.

The teacher understands that behavior is fostered and developed most effectively when children are solving problems that are meaningful to them. She understands as well that growth takes place in relation to experience. There is continuous development in the over-all pattern of physical, mental, social, and emotional growth. Every experience which the child has contributes in some way to growth in one or more of these areas. Next, there is development in relation to general objectives which apply to all units of work. Every unit should contribute to such broad objectives in social living as ability to work well with others; growing skills in leadership and cooperation; habits of independence in thought and action; attitudes of responsibility,

open-mindedness, and consideration of others; and growing skill in critical thinking and making choices, with an attitude of willingness to accept the consequences. As the teacher preplans she will identify experiences which should promote growth toward these objectives. Lastly, there is development in relation to specific objectives which apply to a particular unit. For instance, children may cooperate, make choices, and appreciate the contributions of others equally well whether their problem is "How shall I spend my money?" or "What is there in music for me?" The specific attitudes and appreciations, habits and skills, interests, and ways of thinking which grow from these two problems, however, will be very different.

Specific objectives for the first problem might be "To remember first to buy things I must have" and "To learn to choose things that mean most to me." The second problem might include such objectives as "To make an instrument that I can play in the rhythm band" and "To build up my own list of favorite composers and selections." The teacher will analyze the chosen unit to find opportunities it offers for fostering attitudes and appreciations and for developing specific habits and skills.

In her preplanning the teacher will state the objectives in simple and direct terms so that they may be evaluated in relation to what the child thinks and says and does. She will plan to use objective means whenever possible in measuring growth: observation and recording of behavior, discussion, conference, records of various kinds, tests, and other devices. Then, knowing what the problems are, what behaviors may grow out of them, what techniques may be used to measure growth, the teacher next asks herself, "How?" and considers experiences which must be provided to meet the objectives.

3. She explores possibilities for learning experiences.

The teacher must understand that it is through experiences that the children will grow toward the goals set up. She will anticipate many types of experience and activity necessary to solve the problems. She will consider new types of activity, having discovered, for example, that the children have had many experiences in giving reports and making booklets and movies and need wider experiences in doing, experimenting, going places, and making community contacts.

She thinks of the various ways in which children record information they use in solving their problems: keeping scrapbooks, writing and illustrating stories and articles for group or individual books, organizing information in simple outline form on charts, making diagrams and simple graphs, and keeping a daily "log." If it is a science unit, the teacher considers the possibility of setting up a "laboratory corner" where, with simple equipment gathered by teacher and children, they may carry on experiments which will make their learnings real. The teacher will explore possibilities for field trips and will try to find persons in the community with special interest or experience who may be invited in to talk to the group. The teacher will realize that children learn as they express their feelings and ideas through art and construction

activities, through song and rhythm, through poems and stories and dramatizations. Through such experiences the child will have many opportunities to listen, to participate, and to create. The teacher will plan to use available films, film strips, slides, phonograph records, radio recordings, and current radio programs when possible. The teacher realizes that the best learning takes place when as many avenues as possible are opened up, that children learn through their five senses and through emotional and physical responses as well as through mental processes.

The children, when their turn comes to plan, will usually suggest activities in terms of past experience, so the teacher needs a wider list to supplement their ideas.

4. She explores sources of material.

The teacher finds out what materials are available from as many sources as possible. She explores her own room for materials, she scouts about the building for suggestions, and she refers to catalogs from the Department of Special Services. She plans to get pictures, pamphlets, and books from the professional and public libraries. She lists commercial agencies, such as dairy and food councils, railroads, airlines, travel agencies, and industrial companies which furnish film strips, movies, pictures, pamphlets, and other educational materials. She finds that many free and inexpensive materials are available through educational publishing houses and governmental agencies. The children will later locate many other resources and will be responsible for writing to various agencies (only one child's letter to each, however) and for gathering many of the materials. The children will draw upon home and community for all sorts of material: rocks, birds' nests, leaves, fruits, vegetables, boxes, boards, scrap material, recipes, utensils—almost anything that is needed. Persons in the community are also sources for obtaining information.

5 She increases her own background of knowledge.

In her preplanning the teacher studies all available materials which she has collected. She gets some firsthand information from persons in the school or community. She visits places of interest to increase her own knowledge and to find out what the children should look for on their visit. She reads selected books and articles, which she will later put in the hands of the children. She realizes that sometimes she will need to say, "I'm not sure about that. We will look it up together."

6 She considers techniques and ways of organizing the class for work.

In her preplanning the teacher has tentative ideas for ways in which the group should be organized for work. Later as she and the children plan together, she will help them to see the need for these various ways of working.

a. Participating as an entire group in some experiences. The teacher will anticipate class activities, such as taking field trips, seeing movies, listening to speakers, radio programs, and recordings, making general plans, discussing

problems and matters of importance to the whole class, and summarizing completed work.

b. Working in small groups to solve definite problems A child's interest, attention, and participation are more easily stimulated when he is a member of a small group of five, six, or twelve children rather than when he is one of thirty or forty. He feels greater responsibility to the small group and, also, greater security in making his contributions. Small groups can make more effective use of materials, for the children will be referring to varied materials adapted to specific problems and interests. Usually no one text or pamphlet is provided in sufficient quantity to be used by an entire class at the same time. Many varied materials are used because no one book could provide answers to questions which each group of children will ask in relation to their specific problems and interests. The teacher will understand, then, that working in small groups will provide for more effective learning and more adequate use of materials.

The teacher will consider ways in which children may be organized in small groups. One way would be in relation to individual interest in specific problems set up. This plan may be used when a problem, or group of related problems, is to be worked on by only one group of children who would bring their information to the rest of the class. In this case, after a discussion of various problems, materials, and experiences related to each one, every member of the class would identify the problem or group of problems of greatest interest to him and indicate his first, second, and third choices. A committee, with the help of the teacher, would then make up groups based on these choices. Each group would accept responsibility for exploring a particular problem or group of problems and sharing their learnings with the rest of the class. The children would understand that shared experiences must be varied and graphic in order to challenge the attention and further the learnings of all members of the class.

In the elementary school, and especially among the younger children, it often seems best, when all problems are of general interest and concern, for every group to work in turn on each of the problems set up. Each group at a specific time might be working on a different problem and might approach it in a different way, but in the end they would all have done some simple research on every problem, recording information and expressing and sharing ideas. Sometimes groups may be organized by having children choose those with whom they wish to work. This may be done informally or by the use of a sociogram based on each child's choices in response to the question, "With what three children in this class would you like to work in solving the problems we have set up?" Each child, then, in a group so organized feels that he is working with someone whom he has chosen and with those who have chosen him.

As a rule, when working together on common problems and interests, children are not grouped as to mental maturity level. The teacher will realize that this is a situation in which the child who is slower mentally will profit

by the discussion, help, and leadership of other children. The teacher will provide, if possible, a few easy reading materials for each problem being worked on and may sometimes have to rewrite material. She will remember that children of any level of ability, but especially the slow-learning child, will gain much information through out-of-school experiences, pictures, discussions, ability to get some information from a page which he cannot read word-for-word, group discussions, and special help from other members of the group. These and many other learning experiences will help the slow-learning child to feel that he is making his contributions to group work along with some of the brighter children of the class. Frequently a special aptitude may help to give the slow learner status—like Ben, who could not read but had a remarkable memory, or Lynn, who was usually chosen to letter charts which the other children organized.

c. Working in flexible, changing groups on art, construction, and other creative activities. The groups organized to work together in gathering, recording, and sharing information on specific problems usually remain the same throughout the unit of work. The grouping, however, during the period when art, construction, and other creative activities are being carried on will be more spontaneous and fluid, the children coming together in twos and threes, or fives and sixes, to work on a common interest. When the picture is painted, the boat completed, the poem written, or the play planned, the little group may dissolve, or it may stay as it is already set up and go on into a new activity. If the entire class is planning a culminating program, such as a play, a puppet show, a movie, or an exhibit, definite groups may be organized to take care of such specific problems as scenery, costumes, script, stage settings, and display centers.

The teacher will do little preplanning for grouping in this freer type of work. She will know only that she must keep ahead of the children with her materials, ideas, and ability to organize the situation from day to day so that worth-while work may be accomplished.

d. Providing for individual contributions to the work of the entire class. The teacher will plan to have each child, as far as possible, make his individual contributions. She will think through the ways in which children, often with the help of their parents, may be provided additional materials and experiences which they will share with the group.

7. She talks over her plans with the principal.

The teacher in her preplanning consults the principal for special help. They discuss the needs and interests of the particular groups. They make sure that the unit meets the maturity level of the class and that the experiences offered are new and challenging. They plan the unit so that it fits into the background of the group. They discuss materials to be used and where they are to be found. They explore the available resources and talk over plans for getting in touch with people who can give specific help and information to children as they work on the unit.

8. She asks other teachers for suggestions and materials.

The teacher may get help from other teachers who have carried on units concerned with the same area of living. These teachers suggest books they have found helpful, trips that were valuable, and sources for pictures and other visual aids. They can also suggest techniques they found successful in organizing and handling a number of groups. They can point out difficulties that might be met and suggest ways to overcome them.

This planning among teachers is especially important when more than one teacher is working with a class. An interest or a problem may arise in a music, science, social studies, reading, or arithmetic situation. When it broadens out so that experiences in other fields seem desirable, the teacher in whose class the problem or unit of work originated will confer with other teachers working with the same group in order to plan experiences which they may provide in relation to the problem. Many times these conferences will be informally arranged. In schools where teachers work together in this way, a principal or a committee of teachers arranges a schedule for these planning conferences.

9. She seeks help from supervisors

The teacher talks with supervisors and consultants to get specific help. General supervisors can help with the planning because of their background and their contact with many sources. Art, music, and physical education supervisors can suggest new ideas and techniques for carrying on various activities related to their specific fields. Materials and special help can be obtained from the Professional Library, the Department of Special Services (visual aids), and the Department of Instruction.

10. She confers informally with parents

Informal conferences with parents may serve a double purpose. First, they may help the parent to understand the significance of what the teacher is doing for the children. As they talk over experiences that children are having, Mother and Father may come to understand that when Edward helps to build a streetcar, it will not be just for the fun of it; that when Louise wants Mother's old red blouse to make herself a costume, it will not be just because she likes to dress up. The parent will be led to see that such activities as these are in relation to specific purposes designed to help the child to grow as an individual and as a member of society.

In addition, the parent, knowing his child and other children, knowing the community and its resources, and understanding the implications of the unit, will be able to suggest problems and concerns related to the unit which arise in the home and community.

B. The teacher and the children plan the unit together.

The teacher will remember that the skill developed through many experiences in planning will help the child to meet persistent life situations which call for cooperative planning and action. The amount of definite help and suggestion which the teacher gives will depend upon the maturity level and

past experiences of the group. With teacher guidance children may be led to think through the following phases of planning a unit of work.

1. They name the unit in terms of a problem which has meaning to them.

Children learn more effectively by trying to solve a problem related to their own lives than by gathering facts about some over-all topic. Knowing that the information gained can be used in their everyday lives gives purpose and meaning to their work. For example, a real problem of the children, such as "How can I get where I want to go in Denver?" will have much more meaning to them than the general topic, "Transportation."

2. They find out what they already know about the unit.

The children talk over experiences they have had that are related to the unit and discuss facts and information gained from these activities. This discussion will be the basis of further planning because it arouses questions or points out things children would like to know more about. It also gives the teacher an insight into "just where the children are" so that she can help them to plan new experiences or repeat an experience for a different purpose. For example: Two groups of sixth graders are interested in the same problem, "What makes planes fly?" One group has never visited the airport and could certainly gain from such an experience. The other group visited the airport for another purpose when they were in the second grade but were too young to understand the mechanics of an airplane. Another trip to the airport would provide new learnings for them.

3. They list questions they want answered.

As the children talk freely about the problem they have agreed upon, they will have many questions they want to have answered. Often their background of experience in relation to the general problem will be limited so that they will not realize its scope and possibilities. The teacher will plan to broaden their outlook before trying to draw out their questions and will give the children opportunities to explore materials by browsing through books, looking at pictures, and examining charts, maps, and globes. Then, when the time comes for the children to ask questions, define specific problems, and identify individual interests, they will have a wider vision of the paths which are opening up for exploration. Further questions, additional problems, and new interests will grow out of materials and experiences provided, as work on the unit progresses.

The teacher or a member of the class writes these questions on the blackboard or a chart. Then they go over them and the teacher helps the children to evaluate the importance of the question and to see why they should restate some and eliminate others. For example, a question such as "Should we go to bed early?" may be answered, "Yes" or "No," but it could lead to further study if it were restated, "Why should we go to bed early?" A question such as "How did the earth start?" is too difficult for any elementary group, and the question, "How is coal mined?" is too advanced at certain levels. The children should be led to see why these questions should not be included.

sitions in terms of specific problems they wish to solve.

the children to see how some questions are related and specific problems. For example, children in a fifth grade "How can we have fun outside of school?" They list

and we join?

• games we can share with our families?

entertain guests in our home?

on does the city provide?

elp to plan a vacation with our families?

and last questions can be organized under the problem, "What things a family can do together to have a good time?" This will give direction to the children's thinking.

lives in terms of behavior changes toward which to work. Planning the teacher has recognized objectives that are a mix of experiences and those which should grow specifically out of work. The teacher of young children will not go too far in planning with them. She will help the children with many principles from their own experience. At any level, objectives in simple concrete terms so that children may use actual experiences in judging their growth.

city and many experiences in planning, the children will develop both broad and specific objectives for their work. Ask the children to state them specifically in language that

incorporate all experiences in social living.

or

Children

together.

- (1) Sharing materials.
Taking turns.
Doing our share of the work.
Taking part in the unit.
Respecting standards set up.

responsibility.

- (2) Finishing what we start.
Taking care of ourselves.
Finding other things to do when our tasks are finished.
Taking care of materials.

decided.

- (3) Listening to what others say.
Considering ideas of others.
Accepting decisions of the group.
Recognizing the good in each one's contribution.
Accepting criticism.

*Teacher**Children*

- | | |
|------------------------------------|--|
| (4) Developing social sensitivity. | (4) Seeing and doing things that help others.
Understanding others.
Being thoughtful of others. |
| (5) Learning to think clearly. | (5) Making wise choices.
Offering suggestions that may be used.
Understanding what we read. |
| (6) Improving academic skills. | (6) Learning to express oneself better in speaking and writing.
Learning to use new words in expressing ideas.
Knowing how and where to find information.
Learning to organize information.
Being able to use numbers when needed.
Learning to spell new words that are needed. |

b. Specific objectives for the unit. It is necessary to use a definite example here in order to illustrate specific objectives. The following specific objectives stated in terms of both teacher and child point of view might well grow out of a specific problem such as "What are our responsibilities as members of a family?"

*Teacher**Children*

- | | |
|--|---|
| (1) Being orderly in caring for own belongings. | (1) Putting away my clothes and my playthings. |
| (2) Assuming definite tasks at home. | (2) Having my own definite jobs to do, like
Washing dishes.
Setting the table.
Taking care of own room.
Dusting.
Cleaning sidewalks. |
| (3) Being willing to share responsibilities and privileges. | (3) Helping the rest of my family with their jobs.
Letting my little brothers and sisters do some things with me. |
| (4) Recognizing and accepting parents' guidance and direction. | (4) Trying to do what my mother and father want me to do. |

*Teacher**Children*

- (5) Helping to keep oneself clean and well.

- (5) Trying to keep myself clean and well by
 Washing my hands and face.
 Brushing my teeth.
 Combing my hair.
 Wearing my galoshes when it is stormy.
 Going to bed at a regular time.
 Eating my meals and not too much candy.

- (6) Keeping cheerful and busy.

- (6) Keeping cheerful and busy by
 Being pleasant.
 Finding interesting things to do.
 Playing with my brothers and sisters.
 Keeping cheerful and not pouting when I don't get my way.

6. They set up definite ways of evaluating their progress toward their objectives.

As children and teacher plan together, they decide what techniques they will use to appraise their progress toward their objectives. The children agree that they will think through their own behavior in specific situations; that they will discuss with the teacher, and with each other, their progress and their difficulties; and that they will ask their mothers and fathers for comments and suggestions, with an occasional written report from home. They may decide to keep individual files of their pictures, stories, reports, and letters. The teacher will explain some tests and devices which she, with their help and suggestion, plans to prepare and use.

7. They discuss materials that may be available and where they can get them.

Some materials which children and teacher suggest are:

- Books, periodicals, newspapers, materials furnished by commercial and government agencies
- Pictures, films, film strips, slides
- Records, recordings, radio programs
- Specimens, models, exhibits
- Maps, globes, charts
- Art and construction materials

Some children may be able to bring materials and articles from home. The teacher will contribute materials she has collected during her preplanning. The class will appoint committees to be responsible for getting things from the school or public library, other rooms in the building, or places in the com-

munity. They will also appoint committees to organize and display these materials to the best advantage.

8. They consider experiences which will help to solve their problem:

- Reading for information
- Carrying on discussions
- Recording information
- Taking trips
- Seeing movies and other visual aids
- Visiting places of interest
- Listening to radio programs
- Making experiments
- Constructing models
- Obtaining information from individuals
- Using maps and globes
- Writing stories, plays, poems, songs
- Making picture maps
- Making pictures, wall-hangings, murals

9. They discuss possibilities for culmination of the unit.

This phase of the planning is usually done after the unit is under way, as the various activities seem to lend themselves to a definite type of summarizing experience. Many times the children will see very early in the work how their learnings may be expressed through a puppet show, a dramatization, a series of dioramas, or a fair. Such activities as these may be the thread which weaves together children's creative efforts in art, English, and music. The work on some units may best be summarized by informal sharing of the experience through telling, explaining, and showing what they have done to parents and groups within the building or from another school. Children like to show or explain to others what they have successfully accomplished. Teacher and children must definitely understand, however, that a culminating activity should be an outgrowth of all the work, not something added on at the end. Some of the ways of culmination are:

- Arranging and giving dramatizations
- Making and giving puppet shows and shadow plays
- Writing stories and making illustrations for group books and charts
- Making pictures and writing script for movies
- Having panel discussions
- Making picture maps
- Planning and giving radio programs
- Designing textiles, wall-hangings, murals
- Making dioramas, peep boxes, shadow boxes
- Working on construction projects
- Arranging fairs and exhibits

10. They decide upon their ways of working.

a. Arranging and caring for the room. The teacher and children will plan arrangement of the room for effective work where books and other materials shall be kept, how these are to be cared for and shared, how discussion and work centers may be provided, where exhibits and articles of interest may be displayed, and how the bulletin boards shall be used.

b. Organizing the class for work. Children like the feeling of importance and of responsibility that comes from acting as members of committees and as monitors. They will plan how such groups shall be organized. The teacher will help them to understand the things that are necessary if groups are to work well together. They set up a few such simple standards as:

Do your share of the work in your group.

Try to work quietly.

Stick to your job.

Listen to the ideas and suggestions of others.

Share materials and responsibilities.

Find things to do for yourself.

The children will also discuss experiences in which the class will participate as a whole, and contributions which individual children can make

c. Setting up a tentative time schedule. The children will agree that time must be provided each day for study and discussion periods, and also for work periods when they will carry on their creative and constructive activities.

In addition, they will plan for periods each day when skill and ability in reading, arithmetic, spelling, and music are being developed. They will allow time, too, to read books, stories, and poems, to sing songs, and to play games. Many times these activities will be related to the current problem. Sometimes they may satisfy other needs and interests.

Teacher and children understand that time schedules must be flexible. They will often need to be rearranged because of a field trip, a talk by an invited or an unexpected visitor, a school program, or the arrival of the school nurse or dentist. Many times the current unit of work will be shelved entirely for a few days in order to meet other interests and needs: a community drive, a holiday, or an all-school project. The children will not be greatly disturbed by these interruptions, and the teacher should not be if she realizes that they may provide learning experiences as valuable as those related to the current unit.

5. DAILY AND WEEKLY PLANNING

Weekly Lesson Plan Books.—In many schools each teacher is supplied with a commercially published lesson plan book. Spaces are provided for the teacher to record a brief statement of her plans for teaching each day for a period of a week in advance. In reality, the plan book does not require weekly plans but rather a series of brief

outlines for five daily plans prepared a week in advance. In many of the plan books spaces are provided for the teacher to write a statement of the aims, assignment, teaching materials, and approaches for each subject for each day of the week. While this planning in advance has considerable merit, it is more a brief memorandum than a plan. The teacher should recognize that this type of planning does not obviate the necessity of making more detailed lesson plans. In fact this type of "lesson plan" can hardly be thought of as a plan.

Planning the Daily Work.—A well-established principle of psychology is that, everything else being equal, the more immediate the goal the more impelling is its influence. The remote goals of the large learning units should be supplemented by several immediate objectives. The daily recitation, in spite of its limitations, has the distinct advantage of providing a series of immediate goals for the learner. The work of the daily class period should be related to the larger objectives of the unit and the course. There is nothing inherent in the daily recitation to make it an isolated activity. The best assurance that the work of the daily class period will be related to the other important aspects of the course is careful planning of each day's work.

If the daily class period includes recitation and directed study, the plan should provide for both activities. The teacher's work is not ended when the recitation is concluded. Teacher leadership wisely exercised during the directed study period may be more essential to pupil learning than are the activities of the recitation period.

Planning for the directed study of pupils involves a consideration of the following:

1. Physical environment favorable for pupil study
2. Accessibility of study materials
3. Means of motivating pupils in their study
4. Diagnosis of learning difficulties of individual pupils
5. Procedures in directing the study of individual pupils, particularly slow-learning and superior pupils
6. Methods of eliminating difficulties common to the group
7. Means of checking on the efficiency of the pupils' study habits

Planning for the Daily Recitation.—In planning for the portion of the class period which is devoted to the recitation, the teacher should ask himself the following questions:

1. Why am I going to teach this lesson? (*Purposes*)

Ans. To induce activities which will develop certain:

- a. Abilities
- b. Tastes or ideals

- c. Knowledge (*Learning, information, scholarship*)
- d. Skills or powers (*Discernment*)
- e. Attitudes (*Mind set*)
2. What am I going to do? (*Assignment*)
3. How am I going to do it? (*Method*)
 - a. How shall I find out what the pupils already know about this subject? (*Survey of preparation*)
 - b. What past experience shall I draw upon to introduce the new? (*Arousing desire or motivation*)
 - c. How am I going to teach the new? (*Method; includes consideration of materials, references, pivotal questions, etc.*)
4. How shall I check the results of my teaching?
Ans. By using one or more of the following:
 - a. Summary
 - b. Review
 - c. Discovery of new problems
 - d. Measurement:
 - (1) By individual pupil self-evaluation
 - (2) By teacher evaluation

Characteristics of an Effective Daily Lesson Plan.—The answers to the preceding questions can be organized into a plan possessing the following essential characteristics :

1. Worthy attainable aims (both general and specific) clearly formulated
2. Assignment that provides for pupil motivation, includes definite learning exercises, and contains specific instructions for study
3. Good selection and arrangement of instructional materials for use in attaining the objectives
4. Carefully chosen procedures, in considerable variety and detail, for effective use of the materials
5. Indication of the tentative amount of time to be devoted to each part of the lesson
6. Provisions for evaluating pupil progress
7. Applications of materials to school and out-of-school situations noted
8. Correlation of topic with other topics of the course planned
9. Bibliography of reading materials for pupils and teacher and other supplementary materials
10. Form of the plan, determined in terms of its possible optimum use
11. Suggestions for revision of the plan, added after actual use

Form of the Plan.—Within recent years, an erroneous belief has been prevalent that, while planning is important, the form of the plan has little significance. The usefulness of the plan is dependent to a

considerable extent upon its form. No one form may have optimum value for all types of recitations or teachers. Some teachers may find that a detailed written plan is the most desirable. Other teachers may prefer brief notes on content, procedures, and assignment. It is extremely doubtful that a teacher can obtain the maximum benefit without reducing the plan to written form. Since memory is ephemeral, the written plan is the most satisfactory record for future use. A plan revised after actual use provides an excellent basis for future planning.

A complete plan contains proper captions, indicating topic, date, grade or grade section, class period, and room number. This information makes the plan more valuable to the teacher for future reference. In large schools in which the plans of many teachers are submitted to one central administrative or supervisory office, the inclusion of this information is necessary for systematic and effective use of the plans.

The informal type of plan which follows represents a form which many teachers have found useful.

EXAMPLE OF DAILY PLAN

Reading Activities

Grade: Third

Room: 202

Hour: 10:00

Teacher: _____

Topic: Story entitled "Ups and Downs" in *Streets and Roads*, Curriculum Foundation Series, by William S. Gray and Mary Hill Arbuthnot.

I. General Suggestions:

1. Motivation of pupils for story

Get children interested in reading the story by .

a. Showing pictures

b. Discussing any experiences or ideas children have about the subject—relate to children's experiences

c. Telling part of story

d. Using pictures, concrete objects, music, etc., related to story

2. Give the main thought question dealing with the entire story—can be given orally or written.

3. Present difficult words and phrases pupils will encounter in story

a. Guessing games

b. Map study

c. Pronunciation—vital to story

d. Study of words—prefix, suffix, base words, ending, plurals

e. Use dictionary

4. Start questions in a variety of ways, e.g., What, why, show, tell how, etc.

5. Be sure all understand assignment, where it is, where books and materials are, time allotted, etc.

6. Provide for individual differences
 - Present material orally, written, charted, etc.
 - Supplementary lesson—books, magazines, texts, clippings, reference books
 - Individual research
 - Preparing bibliography
 - Extra report for reading lesson
 - Correlated report—science, social studies, etc.
 - Reading Center—recreation, book reports, reading record, some pupils continue or complete other work
 - Group work (help others, dramatize)

II. Aims:

1. General—To develop understanding and appreciation of elevators in modern buildings (as part of a unit on means of transportation)
2. Specific—(a) To increase children's powers of reading and comprehension
(b) To extend vocabulary of children

III. Preparation for Reading:

1. What kinds of buildings besides department stores have elevators to take people from floor to floor? (Office buildings and tall apartments)
2. Discuss the buttons marked "Up" and "Down" that are used to signal the elevator to stop for passengers. (Be sure the class is familiar with the self-service type of elevator.)

Presentation of Phrases and Words

- | | |
|------------------------|----------------------|
| 1. stamped her foot | 1. Scamp p. 38 |
| 2. sly little monkey | 2. monkey p. 38 |
| 3. pushed the button | 3. buttons p. 40 |
| 4. rushing up and down | 4. also p. 40 |
| | 5. fifth p. 39 |
| | 6. anybody p. 39 |
| | 7. purple p. 41 |
| | 8. I'd (Stands for?) |

Questions to Guide Study

1. How were Mrs. Brown and Jack alike?
(Both trying to catch Scamp running down the hall. Neither could catch him.)
2. How did Scamp escape Nancy?
(He jumped into elevator.)
3. Give two reasons why Nancy's idea was wrong.
(Door wouldn't open and elevator started down.)

4. *Tell* three things about the fun Scamp had.
(He pushed one button after another.)
(He kept going up and down many times—nobody could stop him.)
5. *When* did those on the fifth floor laugh?
(When Jack told the woman who wanted a ride he couldn't take anyone because a monkey was in the elevator.)
6. What idea did Jack have?
7. How did Nancy feel?
8. When Jack's idea came true how did he fool Scamp?
9. What made Nancy feel better?
10. Read aloud just what Nancy said to Scamp
11. What shows Jack took over his job right away?

Word Drill

<i>monkey</i>	<i>buttons</i>	<i>also</i>	<i>purple</i>
<i>money</i>	<i>mittens</i>	<i>already</i>	<i>burst</i>
<i>Monday</i>	<i>better</i>	<i>almost</i>	<i>further</i>
<i>Month</i>	<i>rattle</i>	<i>always</i>	<i>burden</i>
	<i>rotten</i>		<i>curtain</i>

IV. Children Read Story Silently.

V. Questions After Reading Story: (to be written or discussed orally)

1. Why couldn't Mrs. Brown and Jack catch Scamp?
2. How did Nancy try to catch him?
3. Show that Scamp fooled her.
4. Describe the lady in the purple dress.
5. What words show that the lady in the purple dress was irritated?
6. Be ready to read aloud the sentence that tells that Scamp was a funny elevator boy.
7. Why is Scamp a good name for Mrs. Brown's pet? (Main thought question)

VI. Suggestions for revision of plan for future use

The Use of the Plan in the Classroom.—There should be tangible evidence of planning in the teacher's activities in the classroom. As a result of the judicious use of the plan, the value of planning is revealed in the higher quality of classroom instruction. If the details of the plan are designed with facility of use in view, the skillful teacher can easily acquire the ability to use the plan to serve her purposes to the best advantage in the classroom. While there is little objection to fairly close adherence to a well-formulated plan, to rely too much upon its details is unwise. However, the chief values of intelligent planning can be dissipated by a disregard of the plan in teaching.

Deviations from the planned activities can be justified only when it

is clearly evident that the best interests of the class can be served by content and procedures which were not incorporated in the original plan. Immediately after a plan has been used and while the class activities are still vivid in the memory of the teacher, any necessary modifications of the plan should be made. After this preliminary revision the plan should be filed for future use. Further adaptations will, of course, be necessary in terms of the interests, capacities, and needs of other groups of pupils.

QUESTIONS, PROBLEMS, AND EXERCISES

1. What part should pupils have in planning the activities of the daily class period? the units? the entire course?
2. In cooperation with other members of a class committee, plan a source unit as a guide for planning by the individual teacher of a given elementary school grade.
3. Write a detailed daily lesson plan in the subject you are interested in teaching.
4. How can the teacher anticipate pupils' reactions to a particular item of content or procedure?
5. What are the chief bases for selection of content to be used in the daily class period?
6. What factors should be taken into consideration in decisions regarding the form of a daily lesson plan?
7. Write a statement of two or three paragraphs on "The Use of the Lesson Plan in the Daily Class Period."
8. Discuss the statement: "If the work of a course is to be accomplished, it must be planned in advance and in considerable detail."

Chapter 8

DIRECTING CREATIVE LEARNING AND STUDY ACTIVITIES

1. THE IMPORTANCE OF EFFECTIVE DIRECTION OF LEARNING ACTIVITIES

The emerging concept that the methods employed by children in their learning activities are as significant as the acquisition of knowledge, skills, and habits has been instrumental in causing teachers to consider the conditions under which children study. As a director of learning, the teacher has the responsibility of providing suitable stimuli for learning. Equally important is the task of guiding learning activity toward desirable outcomes. The learning situation must be controlled to the extent that satisfactory conditions are established. Many of the factors influencing learning are inherent in the learner. Very important determinants of the character of the learning that takes place, however, are to be found in the learning environment. There are many aspects of the learner's environment, both within and outside the school, which make the control of his study environment imperative. Several factors have contributed to the recent development of plans for directed study. These will be discussed in the following paragraphs.

New Procedures in Teaching.—When the contents of a textbook constituted the sole basis of instruction, a pupil who took his book home with him had all the study materials necessary for what was at that time considered adequate preparation of an assignment. The introduction of the unit and project methods has altered the procedures of study. These methods require the use not only of textbooks, but also of other supplementary materials and library references. Few homes are adequately supplied with these materials. The facilities of the school afford the best opportunity for extensive use of a great variety of study materials.

The new teaching procedures have injected another element into the study activities of children. Formerly preparation for a recitation was strictly an individual task. In the modern school much coopera-

tive effort of children and teachers is considered essential to the successful operation of many learning activities. This involves a group attack upon many of the problems. The solution of these group problems does not lend itself to individual study at home. Cooperative study under the direction of the teacher is essential. The necessity for self-activity in the form of independent study, however, is still present. The two types of study are complementary.

Home Study.—It would be very unwise to say that there should be no homework. There are situations in which the home is the most important source of information. There also are learning situations which can be met only in the classroom. Abstract lessons, which have been formally organized with the major objective of introducing and developing new abilities and new skills, should be studied under the direction of the teacher. Parents often do not understand the techniques used by teachers and in an attempt to help the child, perform the task for him. Individual projects and some group projects for which information may be obtained in the home or in the community must be done outside of the classroom. The following questions should be considered in connection with homework.

1. Is the home environment conducive to study?
2. Are parents favorably inclined to homework?
3. Is the child learning to do things alone?
4. Can the child do the work independently?
5. Will good work habits be developed?

While physical conditions are not as significant as pupil purpose in effective study, distracting elements are not conducive to satisfactory pupil study. In many homes the competition provided by the radio, conversation of members of the family, movies, and games is detrimental to the formation of proper study habits.

The assignments given by teachers have contributed to the difficulty of pupils in doing effective homework. Too frequently the assignments have been too indefinite to present a clear challenge to children in their study. Equally serious has been the poor judgment exercised in regard to the amount of time required of the children to prepare each assignment. Proponents of home study have advanced several arguments in its favor. In this connection it may be useful to consider a recent report of the National Conference of Parents and Teachers in regard to the advantages and disadvantages of home study. A summary of the report follows:

Advantages of home study: (1) Keeps the parents in touch with the school program; (2) develops a feeling of responsibility in the child; (3) provides constructive employment for time which otherwise might be idly squandered or uselessly employed; (4) makes school work a part of out-of-school situations.

Disadvantages of home study: (1) Homework is frequently distributed unevenly with three or four hours one night and almost none on others; (2) it frequently takes time from sleeping hours; (3) after a seven-hour day in school it is too much to expect three or four hours of home study; (4) homes seldom provide suitable conditions or have adequate facilities; (5) disagreeable tasks are often assigned for homework, instead of interesting creative experiments; (6) parents are seldom trained to supervise home study; (7) little time is left for play, cultural pursuits, and contacts with other members of the family.

Weaknesses in Typical Directed Study.—Silent reading is one of several important forms of activity in which children may engage in the directed study period. In some activities, silent reading may be predominant. No one activity, however, should monopolize the time of the study period. Whatever the nature of the work, the teacher should give it her undivided attention. Instruction in school would become more effective if teachers were less active in the recitation and more so in directed study.

In directing pupil study most teachers tend to devote too much time to slow-learning children and neglect the more intelligent ones. In directing study and in all other phases of teaching, sound judgment is required to maintain the proper balance between all the various activities. There is no reason why the judgment of teachers should not be as good in respect to pupil study as in other aspects of their work.

Some children have a tendency to observe the activities of other children and of the teacher and so fail to concentrate on their own problems. If a pupil is wholeheartedly engaged in a piece of challenging work, the chances are slight that he will be distracted by the activities of others.

There is frequently too little checking of results to ascertain the effectiveness of child study. This is an important and difficult matter. Directed study in comparison with other types of child study presents the best opportunity for the teacher to learn the child's method of study.

2. GENERAL PRINCIPLES AND PRACTICES

Combined Work-Study Period.—One of the most significant developments in instructional procedures has been the elimination of the separate recitation and study period in favor of a "true working

period." Under this plan, longer continuous periods of varied activity have replaced the shorter periods devoted to separate subjects. In the longer periods children engage in the study of related subjects. Spelling, writing, and written communication may be combined. Work-type reading will include word analysis, concept building, development of reading abilities. Story hour or literature may be combined with oral language at one time and at another with social studies. The content of work-study periods will vary from time to time, depending upon objectives to be achieved at the time.

Pupil-teacher planning of topics and procedures functions also. A wide variety of source materials may be utilized. Textbooks, magazines, general reference books, pamphlets, models, and films are made available. Guided trips outside the school are undertaken to obtain firsthand information concerning the topic under consideration. While the work usually centers around some general theme or topic, opportunity is provided for individual children to engage in different activities which contribute to the main purpose.

Individual and small-group projects are carried on as well as those involving the entire class. Individual work is characteristic of certain phases of the work-study period. The formality which characterized the older study plans and procedures is dispensed with under the work-study plan. Time schedules, processes, and standards should be tentative and flexible. Under the intelligent guidance and stimulation of capable teachers, the possibility of achieving the multiple outcomes of modern education are perhaps greater in this procedure than in any of the older directed study plans.

Directing Study Activities.—Regardless of how satisfactory the administrative plans for directed study may be, the success of the program depends in large measure upon the effectiveness of the study procedures in the classroom. The essentials of directing study are mutually interactive. For purposes of analysis and discussion, however, they are presented separately. They are:

1. Arrangement of a favorable environment for pupil learning activities
2. Initiation of the learning activities
3. Participation (active and effective) by pupils in study activities
4. Direction of learning activities by the teacher
5. Evaluation of the learning activities by pupils and teacher

The Study Environment.—Psychologists have emphasized the importance of the "psychology of place" in connection with the establishment of desirable study habits. There has been some doubt ex-

pressed as to whether the classrooms in the typical school can be arranged in a manner suitable for pupil study. Little consideration has been given to provision for pupil study in planning school buildings. Eventually as much attention must be given to the proper study environment as is given to plans for the auditorium and the gymnasium.

Many classrooms have insufficient light. This condition may result from too few windows or improper location of a sufficient number. In the case of artificial lighting, the difficulty may result from the use of light bulbs of low candle power or from placing them too far from the desks. Too often the fact is overlooked that the intensity of the light decreases in inverse ratio to the distance. For example, a bulb which gives light of adequate intensity for reading at a distance of six feet from the child's desk is only 25 per cent adequate at a distance of twelve feet. As the distance is doubled, the strength of the light must be quadrupled to give the same illumination. Light meters should be used to measure the intensity of the light in all parts of all rooms at frequent intervals. Since dirt decreases the efficiency of incandescent lamps to a remarkable degree, bulbs and reflectors should be kept clean at all times. Cross lighting and glares also contribute to unsatisfactory conditions for pupil study.

Essential study materials such as reading charts, workbooks, paper, etc., should be readily available. Each classroom should have its own library. Many of the books should be kept in the room permanently. These books should be supplemented by other books pertaining to the work materials but on easier reading levels than the books used by the average children in the room, and also by books on a higher reading level.

Distractions should be kept at a minimum at all times. Noise caused by children passing or talking in adjacent halls may be eliminated by the simple measure of keeping classroom doors closed. Within the classroom every child or group should be taught to respect the right of other individuals or groups to pursue their study without interference. The teacher should be certain that his own activities in directing study do not constitute a source of disturbance.

Initiating the Study Process.—The assignment, whether teacher imposed or cooperatively planned, represents one of the most important phases of teaching. It should be recognized as an aspect of teaching rather than as a step preparatory to teaching. The assignment has been referred to as the key to the learning process, the heart of the problem of pupil direction, the beginning point in teaching, the

guide necessary to effective work in the study period, the stimulus to the learning activity, and a means of directing study. These characterizations represent attempts by various authors to emphasize the significance of the assignment in the study process. Despite this emphasis, the full potentialities of the assignment have not been realized in actual classroom practice. The most encouraging trends in assignments and assignment making are manifest in connection with the unit and project methods of teaching. Some of the most significant trends are :

1. Trend toward the cooperative development of the assignment by pupils and teacher
2. Trend toward greater flexibility in terms of the varying abilities and needs of the different members of the class

Progress has been slow in making the daily assignment an effective instrument in promoting learning. However, in many schools in which the daily recitation is still predominant the page-to-page textbook assignment is being replaced by the topic and problem types.

Functions of the Assignment.—Broadly conceived, the main function of the assignment is to serve as a guide to the pupil in his learning activities. More specifically the functions are (1) to establish a motive or develop interest for engaging in learning activity, (2) to institute worthy and significant objectives which give direction to learning activities, and (3) to give the child a clear understanding of how the purposes of his activities may be accomplished in an economical and effective manner.

Learning is satisfactory when it operates toward a definite goal. A goal lends an interest motive and a direction toward which a child can direct learning, eliminating the nonessential and choosing and developing the essential elements. Motives which are drivers to action are deep-seated in human nature. They cannot, however, be taken for granted. They may lie dormant in regard to intellectual matters unless the teacher is successful in relating school learning to the child's basic needs in such a manner that he is able to associate the activity with himself. While the sources of motivation may reside in the subintellectual life of man, the direction of his activities is dependent upon his intellectual discrimination. (Learning and motivation have been more completely discussed in Chapter 4.) In order to arouse a genuine interest in a topic, it should be related to interests previously acquired. The utilization of native impulses, such as curiosity and manipulation, is often effective.

The Characteristics of a Good Assignment.—The effectiveness of the planned learning activities is dependent upon the degree to which its functions are clearly perceived. As the assignment is a guide for the child it should, like all good guide posts, point unerringly straight to the goal. Plans and directions should be understood fully by the learner. Allowing for appropriate initiative and self-direction, they should be sufficiently detailed and explicit to indicate to the class how to use materials efficiently, thereby preventing children from wasting time in their search for materials.

The character and purpose of the learning activities should be entirely clear to each child in the sense that he knows rather definitely **what** he is to do and **why**. The activity in which the child is expected to engage should be of sufficient value to him to justify the time and effort required for it. Emphasis upon clearness, definiteness, and specificity should not be disturbing to those teachers who believe in the freedom of the child in directing his own activities. There is no real conflict between the two concepts. Where freedom and definiteness are combined, each child has the responsibility for studying his methods of work and analyzing his progress in terms of the factors which hinder or further it. The dangers which might be perceived in a system of definite tasks and goals are offset by freedom in the choice of various activities.

Since children's needs, abilities, and interests vary markedly, flexibility of assignments is essential. A sufficient degree of difficulty is needed to challenge the pupil to his best efforts. The materials of the assignment and the manner in which it is made should serve to arouse a genuine interest in the following class discussion.

Evaluating the Effectiveness of the Assignment.—The effectiveness of the assignment should be measured in terms of the outcomes of the learning activities likely to be engendered by it. The new concept of learning considers the individual as an organism in interaction with his environment. Since these reactions are numerous, the outcomes are multiple. Evaluation of these outcomes is more adequate when observational techniques for recording behavior are employed. The instruments and techniques for measuring the outcomes of learning will be discussed in Chapter 19.

The most common and least satisfactory of all the methods of appraising the assignment is that of devoting the entire recitation to oral testing of the pupil's preparation. Data obtained from the measurement of the pupil's mastery of factual material should be supple-

mented by information gained from a consideration of the following questions :

1. Did the activities invoked by the assignment contribute to the social maturity of pupils?
2. Did the children's study have educative value?
3. Did the assignment lead to activities which contributed to growth in total child personality?
4. Did the work result in new and improved aspects of behavior, such as desirable understandings, attitudes, and appreciations?
5. Did learning activities originate in the purposes of the children?
6. Were the learning materials interesting and challenging to the child?
7. Was provision made for wise use of source materials, choice of values, and solving problems?
8. Were vocabulary and other difficulties anticipated?
9. Did the assignment give proper consideration to different abilities and past experiences of the children in the class?
10. Were initiative, originality, and creative activity on the part of children permitted to emerge?
11. Were the children free from unnecessary tension?
12. Were the pupils able to discover the relationships between the assignment and other assignments?
13. Did the assignment guide the study activities in an economical and effective manner?
14. Was there pupil participation in developing the assignment?
15. Did the assignment induce critical thinking on the part of the children?
16. Were the goals established attained by the children?
17. How many children experienced the satisfaction of success?

The Teacher As Director of Study.—In the modern school the teacher is considered a director of learning of a variety of types having as objectives a variety of types of behavior outcomes, information, habits, skills, interests, attitudes, and ideals. The teacher is responsible for arranging situations which provide suitable stimuli for learning. The skilful teacher performs her role without resorting to the artificial stimulation of warnings of failure, low marks, and coming examinations. Some psychologists suggest the need of disturbing the mental and emotional equilibrium of the child. The only defensible method of creating this condition in the mind of the child is by assisting him in gaining a clear recognition of the need of acquiring desirable behavior patterns which he does not possess. The child's understanding of the value of learning, together with participation in learning activities which are for the most part satisfactory to the learner, is sufficient

incentive. The good teacher does not often find it necessary to disturb the mental equilibrium of the child by instilling fears of grade failure.

The teacher has the responsibility not only of providing interest-developing situations which compel to action but also of leadership in directing the learning activity into channels which result in improved habits of action. The teacher should perform the task of maneuvering the abundant energies of children into approved ways of human endeavor. Assignments should be developed in class and made clear to the learners in a way which excites interest—exploiting the better qualities and personality of the teacher.

The teacher's role in directing study activities is that of leadership, guidance, stimulation, encouragement, and evaluation. The specific duties vary with the nature of the subject and the maturity of the children. While each directed study situation calls for a great range of teacher activities, self-direction should rest as largely as possible with the children at all times. A positive program of teacher guidance in pupil self-direction is indispensable. No policy of negative inaction will suffice.

A requisite of effective teacher leadership in directing study is a thorough knowledge of the practical operation of the laws of learning. Information in regard to the nature of learning is contained in the synthesis of the various psychologies of learning in Chapter 4.

A knowledge of the general characteristics of children and an understanding of the specific abilities and needs of children under her supervision are essential to the teacher in directing study. Information obtained by careful diagnosis of the difficulties encountered by individual children should be utilized in planning study procedures. Obviously, it is impossible to remove the obstacles without a clear understanding of the causes of their existence. Teachers who have never experienced serious frustration in their own learning frequently are unable to realize that their children have problems in this respect. The gap caused by the different viewpoints and degrees of maturity of children and adults also is not easy to bridge.

The directed study situation presents many opportunities for the observation and analysis of study techniques. However, the observations may be superficial and meaningless unless the teacher uses the insights thus gained as leads in assisting children in the formation of effective study habits.

Individual Conferences.—The use of the individual conference as a means of guidance, encouragement, and establishing rapport with the child is a desirable practice. The conference should ordinarily

not be a matter of chance. It should be planned upon the basis of the immediate needs of the child and the more real the purpose the more valuable the conference will be. The technique of a conversation should be employed. The teacher may put the child at ease when opening the conversation by telling him about interests and problems that she faced at his age, always keeping in mind that the incident which she relates is similar to the problem which the child is facing. Then cooperatively teacher and child analyze the problem, plan procedures for solving the problem, and make agreements in regard to remedial work. Just to tell the child that he must improve and to get him to promise that he will do better will not produce results; neither will advice without knowing what the difficulty is be effective.

The sincerity of the teacher and the informality of the conference will help the child to know that the teacher is taking a personal interest in him which will provide the "personal touch" that promotes desirable human relationships and mutual understandings. The ultimate outcome of a conference should be that the child has acquired a better understanding of himself, that he has decided to do something about the problem, and that he knows that someone understands him and is interested in his welfare.

Encouragement and Praise.—Children need encouragement. A word of praise often gives the child who is about to give up trying the "second wind" which he needs in order to get over the hard spot or to complete the assignment. Such comments as "You are doing all right" and "You are on the right track" are effective tonics for the child who is struggling with his work. The teacher's praise and encouragement should not convey to the child the idea that he is doing it to please her, but that he is doing it well.

Often children are discouraged by the many red checks on their papers in spelling, arithmetic, written reports, etc. If the errors must be checked with a red pencil, wouldn't it be wise to check correct responses with a blue pencil? It would encourage the child to see on his spelling paper the word "good" written after three words that have been spelling demons for him and which he spelled correctly. Then the five red checks would not appear nearly so hopeless—for he knows that he has had power to correct his errors. Scientific studies show that accomplishment is a great motivating factor. The child should know that he is one step ahead of where he was yesterday.

The teacher who directs study on a part-time basis rarely if ever acquires proficiency in directing study. The study period is not the proper time for the teacher to score papers or bring her correspondence

up to date. She should devote the entire period to helping, guiding, and encouraging children in their work. It will not suffice to give children the opportunity to come to the teacher's desk for assistance. Those who need help the most may not avail themselves of this privilege. The teacher should move quietly about the room observing and conferring in a subdued tone of voice with individuals or groups of children who need assistance. Whenever the same difficulty is encountered by several children, the teacher may conduct a group discussion for the purpose of removing the source of the trouble.

3. USING PROBLEMS IN DIRECTING LEARNING

Two theories as to the educative process are in conflict. On one side are those who believe that the best preparation for adult life that the school can give is to teach the pupil to meet most effectively the problems of his life as he will live it. On the other is a steadily diminishing number of students of educational theory who have claimed that the attitude of the learner is of little importance. They contend, in fact, that the real values of the subject matter—the disciplinary values—are best served if the child applies himself without any direct interest or incentive or the feeling of any specific need.

There are still others who deny that school should have as its aim training for adult life. Their contention is that child life in itself is worth-while and that no period of life should be sacrificed for any other period. School practice will probably be a compromise of all these theories. Childhood and youth are, without question, periods in which preparation for later life must be made, and consequently the youth must be prepared to solve the problems of life as he will encounter them, regardless of whether or not he can, in the early stages of his immaturity, always realize or feel such needs.

In modern teaching methods there is a tendency to reorganize both content and methods of instruction on the basis of units presenting psychological challenges, called variously activity units, contracts, problems, projects, and life-units. Goals toward which the student should work are furnished by the solution of the problems involved as well as by the standard of attainment or success. In assignments of the nature of problems, more of the planning and oversight of the work is left to the learner and his fellow learners in the group. They constitute attempts to produce learning situations in which the efforts of the pupils are stimulated by a felt need, difficulty, or desire, rather than by the arbitrary assignment of tasks by the teacher.

The problem as a unit of educational activity is probably the best

adapted of all teaching situations to arouse genuine interest and purposeful, wholehearted activity on the part of the pupil. The traditional arbitrary procedure lacks the values and points of strength which appear when study of educational materials and participation in educational activity are the logical and self-chosen procedures for solving problems which present themselves to the learner.

Problems as the Origin of and Guide to Thinking.—John Dewey¹ more than thirty years ago called attention to the fact that thinking originates in some problematical situation. After a detailed discussion of the point, he continues:

We may recapitulate by saying that the origin of thinking is some perplexity, confusion, or doubt. Thinking is not a case of spontaneous combustion; it does not occur just on "general principles." There is something specific which occasions and evokes it. General appeals to a child (or to a grown-up) to think, irrespective of the existence in his experience of some difficulty that troubles him and disturbs his equilibrium, are as futile as advice to lift himself by his bootstraps.

Dissatisfaction with things causes one to start thinking about them in an attempt to find a solution. The starting point of thinking is the recognition of an unsatisfactory state of affairs, the unpleasantness of things as they are, or of desires and how they may be attained. There are enough situations demanding adjustment, for which instructive tendencies and habits have no ready-made solution, to occupy us in all our waking moments.

Problems are always present: problems of health, of finance, of how to win social approval, of how to avoid disapproval and loss of good opinion, frustration of desire for self-expression and power. When experience breaks down, when that which has been permitted to pass as satisfactory no longer suffices, then reflective thinking takes place. Problem-solving teaching may be said to consist in raising perplexity, confusion, or doubt in the minds of pupils in a manner such as to challenge solution and then supervising their efforts at solution.

4. TYPES OF AND USE OF PROBLEMS

Courses Made Up of Unit Problems.—Problems are very successfully incorporated into the unit, which is the organization of the course around meaningful experience or a point of purposeful activity.

¹ John Dewey, *How We Think* Quoted by permission of D. C. Heath & Co., publishers.

The problems set up are attacked each in turn by the pupils. It is necessary to have a large variety of reference books available to students, who may need some initial training in the use of them. Class time may be spent in reading the references, in individual and group laboratory experiences, and in class discussions of a nonrecitation nature. Pupil reports, demonstrations, and exhibits may be employed as summaries when the problems are solved. Classes taught by this method are characterized by the objective attitude of the pupils, motivated by the problem situations created, and the skill exercised by the instructor in stimulating, feeding, and maintaining a state of intriguing perplexity and doubt.

Problems in the Class Hour.—A few puzzling questions planned in advance of the class hour and skilfully employed serve to engage the chief facts of the day's work in their discussion. Some of the most effective teaching the writer has ever witnessed has been that which was in the nature of problem solving and which employed the technique previously mentioned. Enthusiasm, eagerness to contribute, interest in discussion, and fruitful thinking were evidenced by pupils engaged in attacking a problem raised during the class hour. In fact, in many instances they became hard to control; several wished to speak at once, and occasionally did so. The formal quiz over the assigned work was not employed, and the deadening testing of memory was not visible as such.

When problems are used, they should frequently be solved in class. Some are left as a basis for assignment, and others by their very nature cannot be settled definitely. One successful science teacher often started the day's class period with short demonstrations which were "puzzlers." The solution of the problems raised by these "puzzlers" usually led to other problems—in the hands of a skilful teacher this will often be the case—the total of which covered the essentials of the work for the day.

The teacher can keep the class in a problem-solving state of mind when she gives explanations. The skilful raising of questions helps to maintain an attitude of question and curiosity on the part of learners which goes far to insure that what is being said will be listened to with interest and attention.

5. STEPS IN DEDUCTIVE TYPES OF PROBLEM SOLVING

Several ways to overcome an obstacle and find a solution are always possible when one is confronted with a problem. A problem may be regarded as the task which confronts us in finding a way out

when our needs and desires and our adjustment to our environment are not taken care of by such automatic means as habits and reflexes.

Getting and Keeping the Problem Clearly in Mind.—Regardless of which procedure is used, the first step is clearly defining and visualizing the problem or problems. The problem must be clearly understood by the pupils and must be kept in mind throughout the effort at solution.

Keeping objectives in sight and thinking of them clearly is important training as a preparation for the thinking of later life. Adults, in discussions and in other activities, quite commonly lose sight of their aims, or conceive them but vaguely. Evidence of this fact can readily be seen in the digressions from the solution of problems before committees or other groups of individuals.

Searching for Data Which Contribute to the Deductive Solution of the Problem.—The data required in deductive procedure are facts, usually generalizations, which will lead to the solution of the problem. In language the child must determine whether the correct form is "We have seen ten birds today" or "We have saw ten birds today." In solving arithmetical problems children must select the process which will aid in solving the problem. The solutions of these and hundreds of similar problem situations which constitute the bulk of school work necessitate a search for pertinent data, rules which will apply, generalizations which will explain, or other information which will throw light on the problem.

After the problem and its conditions are understood, the teacher must stimulate the individuals of the class to search for possible solutions. This may be done by well-chosen hints and suggestions, by citing references or other sources, and by directing the discussion along lines which seem likely to stimulate the pupil to think of pertinent data. Students must be assisted in analyzing situations, formulating definite hypotheses, and recalling general ideas from which solutions may possibly be deduced.

The best criterion to use in deciding how much suggestion and help should be given the child is: Give just as much help, and no more, as will enable the child with reasonable effort on his part to arrive at the solution in the time that is allotted for it.

Arriving at Tentative Solutions.—After the pupil has gathered all the data which seem pertinent to the problem, it is necessary to make a tentative formulation of possible deductions. The pupil should be taught to be patient, to withhold final judgment, and to formulate

tentative solutions, but to regard them only as tentative. This is an invaluable service which teachers can render to children, because of the value of such training in all the affairs of life—in the home, in business, on the street, at the polls, and almost everywhere.

Verifying the Tentative Solution.—After the pupil has made a critical evaluation of his tentative hypotheses and formulated his deduction, it is necessary to check or verify each conclusion. There are two ways in which this may be done :

1. It may be checked by the examination of further data and other hypotheses.
2. It may be verified by assuming it to be correct, and comparing the logical necessary consequences of the conclusion with what is known to be actually true.

The true scientist never closes his mind on any point. He is always willing to consider more cases and to compare any of his generalizations with known facts.

Summary of Suggestions to Teachers for Directing Problem Solving.—In order to achieve economy of pupil effort and to produce effectiveness in problem solving, the teacher must facilitate the steps in problem solving with considerable skill. Important services can be rendered by adopting the following suggestions :

1. Guide the pupil or class toward suitable and worthy problems.
2. Assist the class to formulate problems clearly, and in such a way as to be of suitable difficulty.
3. Assist pupils to keep problems and conditions of each problem in mind and prevent digression.
4. Assist pupils to find or recall data which will contribute to the solution of the problem, offering hints, suggestions, and references but being careful to give no more assistance than is necessary and thereby avoid depriving the pupil of any educational opportunity.
5. Train pupils to evaluate carefully for themselves each suggested conclusion and to maintain an attitude of suspended final judgment.
6. Train pupils to be systematic in the consideration of hypotheses and their evaluation, to follow some order, and to complete the consideration of one before digressing to another.
7. Assist pupils to formulate their conclusions for themselves.
8. Train pupils to make final check and verification.
9. Provide for the fixing of solutions in mind by drill, application, memory work, or exercises.



First independent seat work These children are identifying phonetic sounds by means of pictures while the teacher is working with another group of children
(Madison, Wisconsin, Public Schools)

6. DIRECTING CREATIVE LEARNINGS

Creative Learnings.—Any experience which is new and novel to the individual is a creative learning, regardless of how many individuals have experienced it before. For example, many children have constructed airplanes by nailing together two boards crosswise, but this does not deprive another child of having a similar creative experience, provided he has discovered the idea and put it into its external form.

Creative learnings can be included in practically every subject. In social studies the culture of a people can be clarified by studying their creations in paintings, poetry, dancing, pottery, weaving, music—this often serving as a motivation for children to create with the same media. In arithmetic some children may create a device in order to clarify the meaning of tens in our number system. Letters and written compositions should be creations of the child through which he projects himself. In oral language, the child communicates to others his pleasures, his anticipations, his appreciations, by inventing a phrase or an expression. Through spontaneous play, many children unravel tangled experiences and vague concepts. An experience either real or vicarious may be expressed in a picture, in a clay model, in a soap carving, and if the child has not copied too completely from another model, it is his own creation.

The Creative Environment.—All children are possessors of creative abilities, but in order to discover them the children must live in an environment which will challenge those potentialities. The school should provide material and equipment with which the child should feel free to express himself. These materials must include many different kinds as all will not appeal to every child. In the primary grades there should be easels, work bench, tools, scraps of various kinds of materials, clay, paints, blocks, pictures, and books. In the intermediate grades all kinds of art and crafts materials, mechanical and electrical devices, and work shops should be available. The playground should be equipped with material which can be used in developing games. In the classroom and on the playground there are many sounds and movements to which some children will react and which can become the basis for creative work in music, in poetry, and in dancing.

The process of creative learning is difficult to analyze. Many creative productions develop spontaneously, such as dancing, acting, singing, playing; while others need direction in the initial stages and

will gradually merge into an original production. Often old ideas are revised and reorganized from an abundance of accumulated information and a new concept comes forth. Children in primary grades are free from conventionalities in their activities while in the intermediate grades children are more realistic.

Directing Creative Activities.—In directing creative learnings, the thing essential to keep in mind is to make it possible for children to use their imagination and reasoning, and through their own efforts solve problems and put things together in a way which is new and different for them, even though it has been done many times by others. All standards must be the standards of the creator—to force upon him the standards of another person would remove the basic characteristic, which is *genuineness*.

In order to create, the imagination must have content. This is supplied through real experiences and vicarious experiences which fit the pupil's maturity and needs. Often it is necessary to make the child aware of what the environment holds for him. Often observational trips are planned so that children experience through seeing, hearing, touching, smelling, and thinking. Then when the children explain, describe, and interpret what they have seen, heard, touched, they are creating. Often the child must be given some assistance by having him answer questions, such as experiential questions, imaginative questions, recall of factual information, and suggestive questions. It must be remembered that children often do not react immediately in a creative manner.

Functional Creative Period.—No definite statement can be made in regard to the length of the creative period, how often it should take place during the week, or whether it should be a group project or an individual problem. The occasion, the type of work, and personnel all must be considered, which implies that the creative program must be very flexible. In a group period, children often discuss discoveries which have been made, plan organization of materials, play with new expressions for new ideas, submit ideas for criticism, listen to original poems and stories by children and to works of artists, and experiment with tools which they will use.

The Teacher's Role.—The teacher's role in a creative learning situation is that of guidance. She should stimulate or draw out children's creative powers through suggestions, by being sympathetic with their efforts, and by refraining from too much adverse criticism. The teacher should provide a stimulating environment and surround

children with examples of creative work by children and by adults. It is the teacher's responsibility to provide the necessary time, as many new ideas and expressions come slowly and should not be rushed. In no case should creative activity be too much discouraged by too much technical criticism. As children develop and gain confidence in themselves, the skills which function in the creative work will improve.

The idea that the classroom teacher cannot teach the creative arts is being dispelled. Many teachers through their enthusiasm and interest are stimulating children to create and to make new things. If a teacher is capable of diagnosing the needs of children in Three R's and in analyzing problems of conduct, she also is capable of discovering the latent creative power in children. If she can encourage and inspire children to master the skills in written and oral expression, she also can inspire them in developing their creative potentialities. The teacher knows from experience that as she diagnoses children's needs from year to year, her ability and understanding of needs and achievement grows proportionately, and as she teaches social studies, and arithmetic, from year to year, her skill increases. She should understand that, as she guides the creative activities of children from year to year, she will grow within that area. If the teacher should plan as carefully for the creative work as she does for the achievement of skills in the Three R's, all normal children will learn to paint, to write, to play according to their own individual growth patterns.

QUESTIONS, PROBLEMS, AND EXERCISES

1. What is the modern conception of the teacher's responsibility in directing learning activity?
2. In what respects do the more recent plans for directed study differ from the older plans?
3. Indicate the activities of the teacher in directing the study of pupils.
4. What place has the assignment in directed study?
5. Evaluate the criteria suggested in this chapter for evaluating a daily assignment. Suggest other criteria.
6. Formulate three problems about which the work of a class might center for several days or more.
7. Suggest a list of from six to eight dangers to avoid in employing a problem-solving type of teaching.
8. What are some kinds of mistakes made by individuals in everyday thinking? How may students in school be trained to avoid these errors?
9. Prepare a five-minute discussion on "How can we give children complete freedom in the creative arts?"

10. How may art be best taught in relation to other subjects? Music?
11. How does an assignment in creative work differ from an assignment in a study period?
12. List several suggestions for encouraging children to be creative.

Chapter 9

DIRECTING LEARNING IN THE PRIMARY GRADES

In this and the following chapter there will be found typical application of the principles underlying good direction of learning in certain important areas of school learning. In this chapter the discussion will center around the lower grades and in Chapter 10 around the intermediate and upper grades.

Every subject is an integration of many skills and abilities. For example, in learning to spell words children must listen to the pronunciation of the words, must understand how the word will be used in writing in order to convey the meaning desired by the writer, and must appreciate the fact that in knowing how to write the word correctly the first time, effort and time will be saved.

In solving arithmetic problems, children must be able to understand concepts of terms used and ideas involved, must be able to classify information needed in the solution of the problem, must be aware of quantitative values in the situation, must recall arithmetical concepts and principles which are related to the specific situation, must be able to ask intelligent questions whenever help is needed, must be able to compute accurately, and to write plainly.

In order to clarify the idea in social studies that improved transportation has progressively made the United States smaller and smaller the following facts and abilities are essential: knowledge of how long it took to go from coast to coast by stage coach, by rail, by pony express, by first transcontinental railway, by streamliner, and by plane; knowledge of where to locate the information needed, which requires abilities to use an encyclopedia, table of contents; knowledge of presenting the information graphically by means of pictorial map and/or a graph.

1. DIRECTING LEARNING IN READING

Children entering the first grade have had many experiences through which they have acquired some abilities which are essential for success in their many school experiences. The ability to speak in sentences, to listen to stories, to understand and follow directions, to

make observations of objects and activities about them is essential in learning to read. Most children have observed the pleasure that "daddy" has in reading the newspaper. Many have had the experience of listening to mother as she reads the funny paper or a story to them. Their interest in reading has been aroused and they enter the first grade with a desire to learn to read.

Reading as a Complex Skill.—The activity of reading is a very complex skill to acquire. In silent and oral reading, symbols to which specific meanings have been attached must be interpreted. Reading also involves emotional reactions such as pleasure, grief, disgust. The essential organ is the eye. Many studies have been made of the eye during the process of reading. We know that the eye perceives the printed symbols during the pauses as it moves from left to right across the page. Poor eye movements are not causes of poor reading, but are an indication that something is wrong in the reading situation. The ear and the voice aid in acquiring the meaning of the printed symbols. The vocabularies which the child brings to school are his speaking and listening vocabularies, and with these vocabularies he puts meaning into the printed symbols by associating experiences with the reading materials. The act of reading is physically fatiguing to a child from the very fact that sitting quietly and putting forth effort to remember and to recall are not in harmony with his natural impulses.

Readiness for Reading.—Many children are eager to learn to read when they enter the first grade, but there also are those who display no interest in the activity. Through guidance and motivation the uninterested child should become interested so that when he has reached the maturity needed for learning to read, he will wish to read.

Factors pertaining to the intellectual development are most important for reading readiness, because of the fact that learning to read is an intellectual process. Before the child begins to read, it is essential that he be equipped with the following readiness factors: have a mental age of six-and-one-half years; be interested in learning to read; possess wide listening and speaking vocabularies; be an intelligent listener; understand that the printed symbols convey meaning; have a knowledge of the fact that the direction of reading and writing is from left to right; see likenesses and differences in abstract forms, be able to retain ideas, be able to think in abstractions; be able to recall and to retell stories and experiences; and be able to remember and to recall words forms.

Means of Determining Reading Readiness.—During the first weeks of school the teacher should learn all that she can in regard to the

reading readiness status of each child. Much information can be acquired by studying the child's environment, his out-of-school experiences, his vocabulary and sentence structure during discussions and conversation, and by administering intelligence and reading readiness tests. The individual intelligence test is the most satisfactory. Group tests have the advantage of being less expensive and less time-consuming. In order to show that tests vary in factors measured, a summary of readiness factors of three tests are presented below.

Marion Monroe Reading Aptitude Test

- Ocular-motor control
- Reaction time-speed of movement
- Recall of symbols
- Correct pronunciation
- Sound discrimination
- Reversibles
- Retention of ideas
- Vocabulary and verbal ideation
- Facile speech and speech defects
- Sentence length
- Laterality of hand, foot, and eye

Metropolitan Readiness Test

- Seeing likenesses and differences
- Motor control
- Vocabulary
- Sentence length
- Knowledge of numbers
- Knowledge of size comparison
- Ability to think in abstractions
- Mental maturity

Van Wagenen Reading Readiness Test

- General maturity
- Range of information
- Ability to see relationships
- Ability to use relationships
- Vocabulary
- Memory span of ideas
- Seeing likenesses and differences
- Remembering word forms

A careful analysis should be made of all available information and of results obtained. The child should be placed in the group which will fit his needs. If the analysis shows that the child is strong in the majority of the readiness factors, if he has a mental age of six and a half years, if he is physically and emotionally adjusted to the school

situation, he may be placed in a group which is learning to read in preprimers. If the analysis shows that the child is weak in a majority of the readiness factors, he should be placed in a nonreading or pre-reading group.

Instructional Program for Prereading Group.—The reading program for the prereading group should be of a remedial nature and be adjusted to fit the needs of the children in the various groups. Probably the children will need many new experiences in order to enrich their understandings and their vocabulary. They may put together puzzles, match pictures, match words (the child is not expected to recognize the words), match numbers (the child is not expected to recognize the numbers), thus developing the ability to recognize likenesses and differences. Read and reread stories and poems, and give the children an opportunity to tell the stories. As the teacher records experiences on the board, children may observe the movement from left to right. The readiness workbook also is a good device, provided a careful analysis has been made of the book and of those parts used which will fit the needs of the children. A summary of readiness abilities contained in several readiness books will be presented in order to show that the books vary in their content, thus making it possible for the teacher to provide for all needs at varying levels of accomplishment.

Mother Goose by Eleanor Johnson

1. Training in ability to follow directions
2. Training in oral expression
3. Training in eye movement from left to right
4. Training in auditory acuity and vocabulary
5. Developing observation and memory
6. Developing color sense
7. Developing ability to note likenesses and differences
8. Developing ability to recall ideas in story in proper sequence
9. Developing ability to associate meaning with printed symbols
10. Developing ability to think out problems
11. Developing ability in story telling
12. Developing meaningful concepts and vocabulary

My First Book by Crabtree, Walker, and Canfield

1. Read a picture story in sequence
2. Develop self-reliance through dramatization
3. Develop memory of ideas and logical arrangement
4. Develop creative ability
5. Develop left to right movement

6. Develop motor-memory coordination
7. Develop discrimination in selection, completion, and association by configuration or shape
8. Develop kinaesthetic control
9. Develop concepts and vocabulary
10. Develop ability to evaluate and to make judgment
11. Develop auditory discrimination

Instructional Program for Beginning Reading Group.—An effective instructional program for beginning reading requires careful planning by the teacher. In planning her work the teacher should be cognizant of the following needs: further development of readiness factors; identifying and recognizing printed words; constantly diagnosing children's reading needs; removing difficulties as soon as they appear; guiding the children as they work with preprimer, primer, workbooks, and work sheets. That the children may understand that reading is a process of thought-getting from printed symbols, experience charts may be built by the children and teacher. Since these charts are based upon the experiences of the children and are recorded in their own vocabulary, the idea that reading comprehension is based on the interpretation of printed material will be facilitated by re-reading the materials.

Word Analysis.—Words contained in books used in first grade are words which are unknown to the child only in form, since they are based on the child's listening vocabulary. In order to become an independent reader, the child must acquire some means whereby he can identify or analyze the word. The instructional program provides for the identification of words through the development of the following skills: to use pictures, context, picture and context combined, general configuration of word, compare with similar word, phonetics, and structure of word. Work habits can be developed by attending to the job in an active and aggressive way.

Teaching Children to Read Selections in Beginning Books.—Reading materials may be presented to children in several ways. Attacking the material page by page and discussing each page in sequence is the procedure used in slow groups. Average groups usually have the power to read the story or selection as a unit. The following steps may be used in guiding children in learning to read selections:

1. Arouse their interest by asking questions, by showing pictures pertaining to the theme of the story, by discussing experiences of the children that parallel those of the story.
2. Remove anticipated difficulties, such as new concepts, new words.

3. State purposes for reading the story, such as to learn what the story was about; to answer questions set by the teacher and/or the children; to verify statements made by the teacher and/or children; to find out what happened to certain characters, etc
4. Read the story orally and/or silently. At this time the teacher observes the children at their work, checks occasionally to note progress, and gives individual or group help.
5. A discussion of the content read should follow the reading activity. At this time children should feel free to ask questions in regard to anything not clear to them or to make any kind of comment pertinent to the story read.
6. Seat work related to abilities being developed may be presented as the final check in order to learn if children can work independently and may be used also to fix new learnings. Suggested activities for seat work are as follows: (1) to draw pictures in proper sequence of incidents in the story; (2) to match sentences and words with pictures; (3) to arrange in proper sequence the incidents of the story read; (4) to match words and ideas with words and ideas in sentences; (5) to select from several possible endings the correct endings for sentences in order to check on comprehension of story read; (6) workbooks.

A creative teacher will think of many other types of activities that will parallel the learnings at a certain level of development. By providing independent work for one group, the teacher will have an opportunity to work with another group.

Independent Reading.—As the child grows in reading power, it should be possible for him to read much easy material other than the material provided in books read during the instructional period. A center may be provided so that the child may go to the reading table when he has free reading time, make his own selection and read to satisfy his own individual interests. Materials which may be placed on a low book shelf are preprimers and primers not used in the instructional program, picture books, story books, jingles, rhymes, science materials, and social studies materials.

Methods of Measuring Achievement.—An accurate appraisal of the abilities which function in reading is basic to any program designed to further growth in learning. A few of the most widely used methods in beginning reading are as follows: (1) observing the child daily as he reads orally and silently; (2) teacher-made tests or checks, such as word recognition from flash cards; reading words aloud, classifying words under appropriate headings, completing incomplete statements, arranging in proper sequence statements about a story read, answer-

ing Yes and No statements; (3) standardized tests, such as *Gray's Oral Reading Paragraphs*, *Gates' Primary Reading Tests*, *Gray's New Oral Reading Check Tests*, *Metropolitan Achievement Tests*, *Stone-Webster Classification Test in Beginning Reading*.

Instructional Program in Second and Third Grade.—The perfection of the skills and abilities introduced in the first grade constitutes the major part of the program in the second and third grade. Within each grade individual differences will be great and it will be necessary to have multiple grouping in order to guide the children according to their needs and to provide reading materials accordingly. It is very important that no child should be frustrated by reading materials beyond his ability. Care also must be exercised that the materials are not too easy, because they do not challenge the child intellectually. At the instructional level the child should comprehend approximately 75 per cent of material read; he should be able to anticipate the meaning; he should not use his finger to keep the place; he should be at ease in a reading situation; and at least 95 per cent of the running words should be recognized by the reader.

Word Analysis.—At about the third grade level the children will encounter words which are not only unfamiliar in form, but also in pronunciation and in meaning. Word analysis introduced in beginning reading should be continued and additional emphasis should be placed on phonics and structural analysis. In order to avoid unnecessary repetition the following suggested program must be continued through grade six. Phonetic analysis and structural analysis which will be developed at each grade level will be determined by the child's needs and based upon materials which he is reading. Drill should be based only upon unfamiliar words which will appear in reading situations.

Steps in the Development of Phonetic Analysis in Word Attack

1. Hearing likenesses and differences in words
2. Seeing likenesses and differences in word forms
3. Having correct pronunciation and enunciation
4. Having ability to blend
5. Having a basic sight vocabulary
6. Having skill in substitution of initial and final consonants
7. Having skill in blending initial and final consonants with medial vowels
8. Understanding that consonant letters may be silent—add
9. Understanding that one vowel between two consonants usually is short—cat, hop

10. Understanding that vowel at end of word or syllable usually is long—go, no
11. Understanding that sounds of consonants may vary—played, stopped, wanted
12. Understanding that some sounds are represented by several letters—th, sh, ch
13. Understanding that some sounds may be represented by different letters—ow, ou
14. Understanding that vowels have many sounds and that the sounds are determined by the environment of the letters in the word or by the positions of the vowels—mat, mate, car, tall, pail, road, meet

Basic Principles of Phonetic Analysis

1. Association of a familiar word sound with an unfamiliar word form
2. Checking responses by knowing that the printed symbol makes sense
3. The word is the phonetic unit
4. Position determines vowel sounds
5. Silent vowels determine vowel sounds
6. Consonant controllers determine vowel sounds
7. Consonant blends are not to be divided

Structural Analysis in Word Attack

1. Understanding of compound words
2. Understanding of syllabication
3. Recognizing prefix and suffix
4. Identifying the root words
5. Recognizing contractions

The identification of a known word within an unknown word does not imply that it may be any word—it must be the identification of the root word. For example—in the word *washer* the child recognizes the suffix *er* and knows that the known word is *wash*, not *was*, or *her*, or *she*, or *as*, or *ash*.

The use of contextual clues is another means of recognizing words, the initial consonants frequently being good leads. In order to use contextual clues the material read must have meaning for the child and the new word must be within a context of known words.

Concept Difficulties.—In developing independence in comprehending meanings of words, children must be guided in discovering how the author often clarifies concepts through the context by using punctuation marks, figures of speech, pictures, and diagrams. An-

other skill to be developed in acquiring meaning is to use several meanings of a word; as each meaning is applied to the context, think critically in deciding which meaning makes sense in a particular situation.

Reading Areas.—The content subjects constitute a fertile field in which reading functions as a tool in acquiring information. Intelligent guidance on the part of the teacher in having the children apply their reading skills and abilities will pay great dividends in improving the fundamentals of reading and also can be a motivating factor in developing a desire on the part of the child to understand what he is reading. The content subjects may be considered as a basis for functional learning in that the child applies his knowledge of analyzing unknown words and also discovers ways in which the author or writer has attempted to clarify the meaning of new words and new ideas. Methods used in presenting reading selections, materials for the independent work period, and methods of evaluating achievement all follow the same pattern as presented for beginning reading.

The Story.—Teachers who understand children know that they enjoy reading and listening to stories and, therefore, use the story for many purposes. The primary teacher uses the story to enlarge the child's vocabulary and to create an interest in learning to read. Phonograph recordings of children's stories and rhymes also are used in reading readiness groups in order to develop an interest in reading. Collections of records which may be used with children are found in Appendix E of Gesell and Ilg's book on *Infant and Child in the Culture of Today*.¹

A story may be used as an effective instrument in mental hygiene. The child who is frustrated because he has lost a tooth or because he uses a crutch in order to be able to walk may learn through a story that he is not different from other children who have had similar experiences. Children who are excited and/or fatigued also may find relaxation in a story.

Stories also help children to understand abstract terms, such as kindness, truthfulness, and fairness. Stories which are told or read for the purpose of developing an understanding of desirable character traits should present the incidents so vividly that there should be no need for any moralizing on the part of the teacher.

Primary children enjoy hearing and repeating stories, poems, and rhymes. Children should not be required to memorize stories or

¹ A. Gesell and F. Ilg, *Infant and Child in the Culture of Today*.

poems selected by the teacher, but they should be permitted to make their own choice in regard to the selections which they wish to remember.

In selecting stories for children, the teacher should consider those factors which appeal to the child. Investigations show that the characteristics of stories enjoyed by primary children are as follows:

1. Animal stories which arouse their emotions and imaginations
2. Humor portrayed by characters that are amusing and by words that have meaning to the child
3. Exaggeration
4. Fairy tales that carry them into the realm of imaginary experiences
5. Incidents which recall past experiences and familiar sounds, tastes, etc.
6. Vocabulary similar to their speaking vocabulary
7. Action which moves rapidly toward the climax

Every teacher must assume the responsibility of familiarizing herself with children's stories and books. The most effective procedures to use in order to become acquainted with children's literature are to read and to study the books. If library facilities are not satisfactory, anthologies such as *Children and Books* by May H. Arbuthnot are a great aid.

Dramatic Play and Dramatization.—The teacher should create situations which will stimulate wholesome dramatic responses, such as a playhouse, a store, toys, books, etc. As the child gains confidence in acting through his "make-believe" play, he becomes ready for the second step, interpretation through dramatization. When the child knows the story so well that it is a part of his living, dramatization should come spontaneously. Children should be allowed to use their own words in interpreting stories. Dramatizations should not be dictated by the teacher and only those stories should be used which offer possibilities for creative expression. Variations of dramatization are puppet shows, marionettes, motion pictures made by the children.

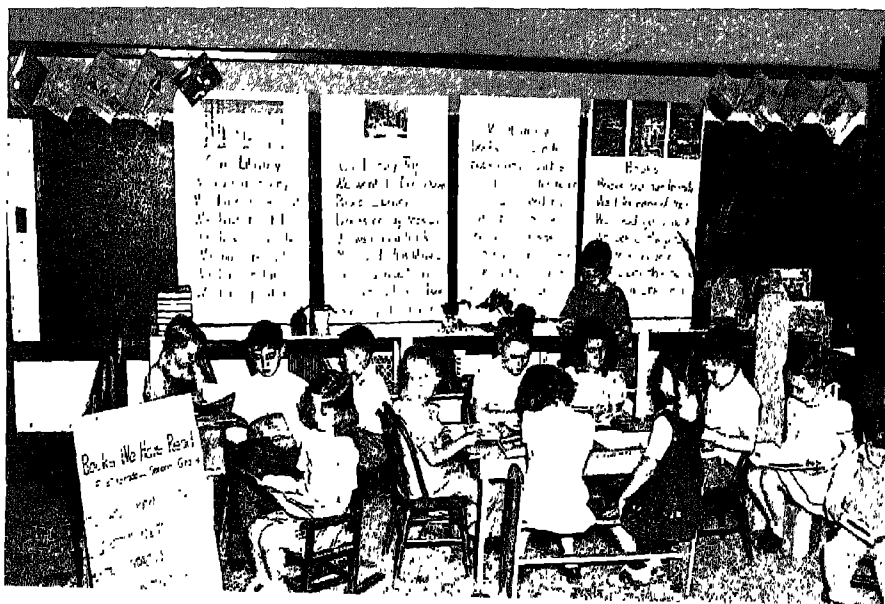
2. DIRECTING LEARNING IN THE CONTENT SUBJECTS

The content fields in the elementary school curriculum consist of social studies, natural science, health, and safety. In grades one and two, information is obtained by taking observational trips, by experiencing activities such as caring for pets, by studying pictures, by exchanging ideas and understandings in a discussion period, and by



Elementary science interests in primary grades.
(Corcoran School, Minneapolis, Minnesota)

A functional reading center in a primary unit.
(Chattanooga, Tennessee, Public Schools)



reading. In the third grade the same methods are used but children are more independent in gaining information through reading.

Usually the procedure used in teaching within this area is that of developing *Units of Experiences* within areas of children's interests and needs. In each unit problems are presented and children solve them by using those activities which are most feasible. For example, in a first grade unit on *The Home* one problem may be:

What are the different kinds of houses which serve as homes?

- a. Informational background. Houses are built for single families. A duplex is built for two families. Apartment house is a house in which many families live. Trailer is a very small house on wheels that can be moved by attaching it to the back of an automobile. A Quonset hut is a very low building with dome-shaped roof. Emphasis should be placed on home life, rather than physical aspects of the house.
- b. Suggested activities
 1. In discussion period children share experiences of types of homes in which they are living.
 2. Study bulletin board pictures of different kinds of houses.
 3. Compose stories about different kinds of houses.
 4. Illustrate different kinds of houses in drawings.
 5. Visit homes of several children.
 6. Make frieze showing types of homes in community.
 7. Find pictures of various kinds of homes in magazines and make class booklet.

A third grade unit on "*Plains Indians*" may have a problem based upon: By what means did the Indians travel from place to place?

- a. Informational background
 1. On foot, traveling long distances without losing way in forest because of keen powers of observation and knowledge of woods lore. Good runners could cover fifty miles between sunrise and sunset.
 2. Horseback—bareback.
 3. Travois, a simple A-shaped framework of sticks which could be piled high with baggage and pulled by dog or horse.
 4. Bull boats, made as round tubs of buffalo hides over wooden frames—difficult to steer, but capable of carrying large loads
- b. Suggested activities
 1. Read stories to learn how Indians traveled.
 2. See moving picture "The American Indians."
 3. Construct a small travois.
 4. Make papoose cradles for dolls.

5. Make frieze showing means of travel.
6. Study pictures on bulletin board.
7. Write stories.
8. Exchange ideas in a discussion period.

The unit necessitates the use of a great variety of materials. The reading materials should represent many levels of difficulty, thus making it possible for every child to read on his basal or interest level. Since many new terms and ideas are being developed in the content subjects, it is essential that the teacher have a rich background of information so that she can clarify concepts during the discussion period and thus prevent children from becoming confused and frustrated.

Understandings and Appreciations.—By using the unit organization in the content fields learnings within the areas of living are integrated. It is impossible to delimit health, safety, or uses of our natural resources, within their own technical setting. By means of the many and varied experiences and learnings which will arise in a natural way in solving the many problems, children will meet persons in their immediate neighborhood and in their wider community, which today has become a world community. Children will learn that we are dependent upon others for many of the things which we need physically, emotionally, socially, and also for the tools needed to solve our problems. Children will learn to appreciate the fact that we judge behavior patterns of all individuals and peoples on the basis of their culture. Children learn that every privilege carries a responsibility. They learn that the needs of others are as important as their own needs. By means of solving the problems in multiple groups and often meeting also as one group, children will learn what it means to be active cooperative producers and thus the “grass roots” nature of the part they must play in this “One World” may be understood.

3. DIRECTING LEARNING IN THE LANGUAGE ARTS

There is much current criticism of children's inability to speak, to write, and to spell correctly. One cause of the existing situation may be found in methods employed by teachers. When language, spelling, and writing are taught as separate subjects, thus keeping the skills and habits of each in its own compartment, no provision is made for the children to integrate all skills in a functional situation; therefore the application of learning in a real life situation is most ineffective. When a teacher is not sensitive to the fact that it is her responsibility to guide the child in developing a critical attitude toward

correct usage and correct spelling whenever and wherever he speaks and writes, the learning will not be as effective as it should be.

Oral Language.—In the primary grades the major objective of the language arts is to help the child to communicate orally. Children should learn to share with others their experiences, surprises, and disappointments. They also must know how to make their needs known. Oral language is a cooperative affair—there must be a speaker and also a listener or listeners. The social climate of the situation conditions many children in the kind of contribution made and the interest with which it is accepted. In order to have a desirable situation the speaker must be sincere in making his contribution and the listener must be sincerely interested in what is being said.

Growth in Language Power.—In order to communicate with others, we must have a background of information upon which we can draw, and we also must be interested in increasing our own knowledge. In the primary grades, the major sources upon which children draw for communicative content are their own varied experiences. Through listening to others, children learn to use the words, phrases, sentences with which they convey their ideas. Many and varied experiences and many contacts with children and adults are necessary in building the child's power to express himself. It should be remembered that the teacher's major responsibility is to encourage and to stimulate children to want to speak well.

Functional Centers of Communication.—In the primary grades oral communication is functioning most of the time during the reading process, the creative period, and the play periods. In spite of this, it is advisable to have frequently a short period devoted to guidance in stating their ideas clearly, correctly, and coherently, which will give them confidence in their ability to express themselves. During a group conversation the teacher should provide opportunities in which children have a chance to talk about interesting happenings, to tell experiences that they have heard from others and to show things of interest to the other children. The children and teacher should set up the standards for the period, such as (1) to talk about things everyone will be interested in, (2) to talk only when no one else is talking, (3) to give others a chance to talk, (4) to listen carefully. Following the conversation, they should evaluate their conversation in the light of the standards set up by the group.

A discussion is generally more formal than a conversation and deals with such things as solving a problem or getting information

In a discussion, the speaker must follow one idea and must stick to the problem. Children should not be required to make the distinction between a conversation and a discussion, but the teacher must keep it in mind so that she can guide the work effectively. A discussion may involve planning a trip, planning a party, consideration of the results of a project, etc. For example, in planning an excursion the following points may be considered: desirable behavior on the trip, things to look for, questions to be asked of those in charge, and safety precautions.

Written Communication.—First and second grade children should be required to do very little writing, and that which is done should serve a real purpose. For example, they learn to write their names in order to identify their drawings. They may write a note asking someone to visit the school. The first writing experience should be a group project in which the teacher and children decide what they wish to write. The teacher must be careful not to dominate the discussion and thus discourage the initiative of the children. Children must learn to select the important points of any written message. The teacher writes the word, sentence, or message on the board and calls attention to the correct use of capital letters and periods. In the first grade, children should copy the message from the board. Toward the middle of the year in grade one and in grade two, the more mature children should show a desire to write without being motivated by the teacher. In the third grade children should begin to see the necessity of observing certain forms for writing and the concept of the paragraph should be developed.

Written work takes place in the primary grades whenever it is needed. Letters are written to children who are ill; thank you notes are written to individuals who have made a contribution to the school program; outlines are based upon observation trips; stories are based upon experiences; and announcements of lost and found articles and of room attractions are posted upon bulletin boards. The number period provides opportunities for the children to write. Posters and pictures should have captions or legends. By using functional centers for writing experiences, the motivation grows out of the situation and children will learn to appreciate the value of writing in a legible manner.

HANDWRITING

Because of the beginner's immature hands and motor control, his writing often has the appearance of scribbling. He should not be ex-

pected to approach perfection as compared with an adult's ability to form letters. Experiments, practice, and opinion reveal that manuscript or printscript is the most practical and effective writing for beginners. Cursive writing is preferable for the intermediate grades and the change from manuscript to cursive should be made in second half of grade two or in grade three—the development of the child determines appropriate time for the individual child.

Primary teachers must acquire the skill of manuscript writing and should use it in writing the experience charts, notes, invitations, and stories dictated by the children. As the teacher writes, the children observe closely and whenever they copy the notes, invitations, etc., special guidance and instruction should be given (if needed) in how to form the various letters. The form of the letters will be quickly learned by the children as they are copying and writing the materials. Formal drill on each letter as an individual character will not be needed.

Transition from Manuscript to Cursive.—Cursive writing (joining letters) should be introduced gradually. The cursive writing should be placed under the manuscript writing on the blackboard in advance of its introduction; in this way the children become familiar with the appearance of the forms and joinings of cursive writing. After ten or twelve weeks of transitional experimentation, cursive writing should be used in all written expression under the supervision of the teacher. Manuscript forms should be used for labeling, captions, and any other situations in which manuscript writing is more suitable than cursive writing. The cursive letter forms in enlarged form should be kept before the children in a prominent place so that they may have opportunity to study them.

The Left-Handed Child.—The left-handed child should be permitted to use his left hand in writing. The roots of the "hook" or the twisted hand position of the intermediate grade child are started in the primary grades. It is the responsibility of every primary teacher to observe and guide very carefully the writing of the left-hander. The desk of the left-handed child should be turned around so that the light will come over the right shoulder. Papers must be slanted to the right. The left-handed child's normal slant will be to the left. Since the left-handed writer cannot keep his hand beside the word, his pencil must be gripped in such a manner so that his hand will miss the letters which means that he must grip the pencil farther away from the writing point.

SPELLING

Spelling Readiness.—Writing and spelling are of value only when they function as means of communication. The major problem involved is that the children become cognizant of the fact that when we wish to use a word in a writing situation, we must recall the proper position of the letters which make up the word in order to convey the message desired to the reader. The ultimate goal is to be able automatically to write words correctly so that the writer may concentrate on the content which he is recording.

Building a readiness for spelling is the major problem for the first grade teacher. Readiness factors are (1) an understanding of the need to write words correctly when copying an invitation, etc., (2) understanding meaning of words, (3) recalling muscular movement required in copying words, (4) seeing likenesses and differences, (5) pronouncing words correctly, (6) hearing words correctly, (7) attending thoughtfully to the job to be done. Great care must be exercised that in early primary grades the spelling skills do not interfere with the early reading habits which are being developed.

Spelling Process.—The process of using spelling functionally is an interaction of associating the sound of the word with form of the word and the motor habit of the hand in forming the letters, while the mind is creating that which is to be written. Before the middle of the second grade, normal children can recall some words correctly for writing purposes. In many words they can recall part of the sounds and can write the letters representing the sounds. This should be accepted as a great accomplishment at this level, since it is the initial step in understanding the concept of the word "spelling." These partial learnings are the first steps in learning to spell, and a child should be encouraged to take this step rather than to be discouraged because he has made an error. The growth pattern in acquiring the abilities to spell is also a developmental process. By the end of the second grade children have acquired a basic writing vocabulary from copying invitations, short stories, etc., from the board; from working on analysis of words by means of phonics in reading; by observing signs in the stores, street signs, labels; making records of experiences in social studies, science, or health units. In the third grade, children of average ability are beginning to write freely and should be encouraged to check their spelling with words in their readers, or a list based on their needs prepared by the teacher and made accessible to the children. Children also are given assistance in groups and as individuals in developing their power to recall words automatically.

4. DIRECTING LEARNING IN ARITHMETIC

When a child enters the first grade, he may be able to count by rote and may understand several quantitative and qualitative words, but these abilities are not sufficient to introduce the child to an abstract idea, such as $3 + 2 = 5$. There is no justification in delaying the development of a vocabulary having numerical concepts. An understanding of numbers, combinations, measurement develops gradually and has its beginnings in the preschool years. Early in life, the child wants two pennies, two cookies—one for a friend and one for himself. He measures the sand in the sand box with a spoon or a cup. Numerical concepts developed in this way are very concrete learnings.

The modern philosophy of teaching numbers or arithmetic stresses meaning and understanding of quantitative relationships. In order to do this, children must see sense in what they are doing, which means that abstract ideas of number facts must grow out of concrete situations or functional experiences. Investigations show that children have learned number concepts through real experiences before entering first grade. Since many primary grade experiences call for the use of numbers, it is essential that the teacher assume the responsibility of making numbers significant and meaningful for the children.

Informal Teaching.—Numbers in the primary grades should be taught informally and should be integrated with other learning activities. For example, numbers function during the story period: May sits on the first chair; today the story will be told before the milk period and tomorrow after the lunch hour; in the story of *The Three Bears*, a *threeness* is developed through three bears, three chairs, three bowls, three spoons, and three beds. During the painting period, children need large sheets of paper. They use small paint brushes and they may need a half of a glassful of water for paints. If there are nine children in the reading group, nine books will be needed. One situation will be presented in order to illustrate some of the number learnings involved.

5. PLANNING A VALENTINE PARTY

A first grade has decided to entertain the kindergarten at a Valentine party. The children planned to decorate the room, make valentines, and to serve cookies and milk. During the activity the children experienced following number ideas:

1. Rational Counting

- a. Count the number of children in the kindergarten.
- b. Count the number of boys in the kindergarten.
- c. Count the number of girls in the kindergarten.
- d. Each child will receive one bottle of milk. How many bottles will be needed for the kindergarten? For the first grade? For both grades?
- e. If we make one valentine for each kindergarten child, how many valentines will we need?
- f. The child counts the number of pieces or sheets of paper needed for the valentines.
- g. Each child will have one cookie. Count the number of cookies needed.
- h. Napkins must be counted.
- i. Extra table and chairs may be counted.
- j. Each child counts his pennies which he brings for the party.

2. Identification

- a. The children at Mary's table are in charge of the decorations.
- b. How many children are in charge of the decorations?
- c. How many valentines are on James's desk?
- d. How many valentines are on the bulletin board?
- e. How many kindergarten children just walked into the room?

3. Reproduction

- a. Give four valentines to Jack.
- b. Give table one three bottles of milk, three napkins, three cookies.
- c. How many pennies are on my desk?

4. Ordinals

- a. Our party is to be held on Tuesday. What day of the week is this?
- b. The valentine paper is on the second table.
- c. The paste is on the fourth shelf.

5. Fraction one half

- a. Fold the valentine paper in half.
- b. Give Mary half of your cookie.
- c. The milk bottles are half-pint sizes.

6. Time

- a. The party will start at two o'clock.
- b. By one o'clock the room must be in order.

7. Comparison

- a. Are there more boys in the kindergarten than girls?
- b. Are the tables which we borrowed from the kindergarten room larger or smaller than our tables?
- c. Is Mary's valentine smaller or larger than Jack's?

8. Calendar

- a. Name the month in which we will have our party.
- b. Name the day of the week.
- c. St. Valentine's day is on February 14.
- d. In how many days will we have our party?
- e. How many days in February?

9. Money

- a. Every child will bring ten pennies to help pay for the cookies
- b. Ten pennies make one dime.
- c. Two nickels make one dime.

10. Recognizing, reading, and writing numbers

- a. Who can write the number that tells us how many girls are in the kindergarten?
- b. Who can write the number that tells us how many cookies each child will receive?
- c. This number tells us how many extra chairs we will need. Who can tell me how many chairs we will need?
- d. I wrote the date of our party on the board. Can you read it for me?

During these experiences the teacher may give the children symbols representing the ideas. For example, if the group should be planning a garden project many ideas should be recorded for future reference, such as that they may need four packages of seed; record it as 4 packages of seed. Record three hoes as 3 hoes. A child may discover that, by giving two crackers to one child and two crackers to another child, he has given away four crackers. The discovery would be written first as a story—two crackers and two crackers are four crackers, and later in the more abstract form, 2 crackers and 2 crackers are 4 crackers; finally $2 \text{ crackers} + 2 \text{ crackers} = 4 \text{ crackers}$.

Problem Solving.—Many problems arise daily and should be solved by the children under the guidance of the teacher. Concrete materials should be used in discovering the answers. From the concrete we move to the use of pictures which represent the ideas. This leads into the semiconcrete, which is just one step removed from the last step, the abstract. Problem-solving experiences in primary grades vary from group to group and teachers should be alert for the natural experiences which arise in their own particular situation. It should not be a forced experience. Typical primary problematic experiences are bringing money to pay for milk and crackers, making a play house, building an airplane or a train, building a store, playing school, playing house, checking the calendar for various purposes, or planning a party. The reasoning ability needed for problem solving

develops in the natural process of growth and therefore all learnings should be adjusted to the maturity of the child. In planning number experiences for primary children the teacher should keep in mind the following principles :

1. Primary number work should be presented informally through the children's experiences.
2. The transition from concrete number experiences to abstract numbers should be very gradual.
3. Children should discover the solutions of problems by using concrete materials and/or counters.
4. Real number situations taken from children's experiences should form the basis for problem solving.
5. Abstract computations are postponed until children display maturity for them.
6. Multiple grouping should be used in the third grade in making provisions for individual differences.

QUESTIONS, PROBLEMS, AND EXERCISES

1. Analyze and evaluate two reading readiness tests and two reading readiness workbooks.
2. Prepare a ten-minute discussion on "Teaching children to read through realistic experiences."
3. Discuss the activities which are involved in third grade work-type reading.
4. Discuss values of various means of evaluating the effectiveness of a program in developing the skills in word analysis.
5. Be prepared to discuss the objectives of social studies in primary grades.
6. Prepare a five-minute talk on "Ways in which conversation makes contributions to valuable social habits."
7. Give reasons why manuscript writing is recommended for primary children.
8. Trace the development of the "hook" so frequently developed by left-handed children.
9. What does educational research reveal in regard to the understanding of numbers by primary children?
10. Prepare a five-minute discussion on "Why it is not necessary to drill children formally on every specific addition fact."
11. Prepare a five-minute talk on "The relatedness of writing, spelling, and oral expression."
12. How should the outcomes in primary numbers be evaluated?

Chapter 10

DIRECTING LEARNING IN THE INTERMEDIATE AND UPPER GRADES

The transition into the intermediate grades is an experience which may be very disturbing to many children. Reading materials are more difficult since they present many strange concepts in a more abstract manner; many sources of reference materials are used and must be evaluated in a critical way; and new study skills must be acquired. Facts, knowledges, and abilities function as tools in their advancement to higher levels of accomplishment. Reading, language arts, and arithmetic are significant only when they make for more effective living in our democratic society.

Teachers of today have a broad concept of learning experiences in the intermediate and upper grades. They are cognizant of the fact that abilities developed in the primary grades must not only be maintained, but extended, refined, and perfected in the intermediate grades. They realize that the primary teachers guided the children in skills appropriate to the child's maturity, and that they must carry on from there, as all learning is a continuous process. They know that factors which influence learning must be analyzed in the intermediate and upper grades as well as in the primary grades.

General Intellectual Ability.—The results of tests of mental ability administered in intermediate grades reveal that many children do not possess the ability to perform any of the intellectual tasks required by the present-day curriculum. The wide variations in the mental abilities of pupils enrolled in elementary schools are discussed in Chapter 18.

Lack of Reading Ability.—Many children entering the intermediate grades have not acquired independence in analyzing words, in comprehending materials read, and in being able to read effectively materials in different areas of learning, such as science and social studies. The range of reading abilities within each grade is great. In any intermediate grade the poorest reader may be two or three grades below the average child in the class and the best reader may read as well as the average child three or four grades above.

Invoicing Children's Reading Needs.—During the first weeks of school in the fall, the teacher should learn at what reader level each child can read independently, how proficient each child is in attacking new words and in discovering the meaning of words, and how well he can locate information. Various means of checking should be used in determining the child's level of achievement in the fall, such as:

1. Study child's accumulative record in order to ascertain his intelligence, physical defects, illness, attendance, home environment, and the like.
2. Observe children while they read silently and orally and note difficulties.
3. Discover things of interest to child through conversation with him.
4. Use teacher-made tests.
5. Use standardized tests, such as

Durrell Analysis of Reading Difficulty. Yonkers, New York: World Book Co. Tests word analysis, comprehension, and oral and silent reading.

Gates Basic Reading Tests. New York: Columbia University, Teachers College, Bureau of Publications. Tests understanding of general significance, directions, details, and outcomes.

Gray's New Oral Reading Check Tests. Bloomington, Ill.: Public School Publishing Co. Tests speed and oral reading.

Iowa Every Pupil Test of Basic Skills. Boston: Houghton Mifflin Co. Tests vocabulary, details, and paragraph meaning.

Van Wagenen Diagnostic Examination of Silent Reading Abilities. Minneapolis, Minn.: Educational Test Bureau. Tests speed, vocabulary, comprehension of central idea, details, inferences.

If the results show that the children are weak in many of the reading skills, special groups should be organized to take care of their needs. All groups should be flexible so that any child may move to another group in order to provide for deficiencies or advancements.

1. DIRECTING LEARNING IN READING

Since the child is living in a reading world, and since much of the information in intermediate grades is acquired through reading, it is imperative that he become a facile reader. Teachers are cognizant of the fact that many of their instructional problems are those which are associated with reading. They also realize that effective reading requires skills to use not only the mechanics of reading, but also abilities which function in interpreting many different kinds of materials read. He must know how to accomplish his purpose in reading and must

make use of his learnings. Reading-study abilities which are stressed are (1) to be able to locate information; (2) to be able to organize materials read; (3) to be able to follow directions; (4) to be able to predict outcomes; (5) to be able to note details in selection read; (6) to be able to read critically; (7) to be able to remember what has been read; and (8) to be able to use the library. A careful analysis of each of the abilities listed will reveal that the teacher's task in the intermediate grades will require as much patience and guidance as the primary teacher's task required. A brief analysis of each of the abilities follows :

1. To locate information
 - a. To know source of various topics
 - b. To be able to use index
 - c. To be able to use table of contents
 - d. To be able to skim
 - e. To know how to use various library aids
 - f. To be familiar with different parts of the book
 - g. To know how to use the encyclopedia
2. To organize materials read
 - a. To be able to arrange topics and subtopics in the light of a specific purpose or problem
 - b. To be skilful in finding topics and subtopics of a paragraph
 - c. To understand how to outline
 - d. To be able to arrange topics and subtopics in the light of the author's purpose
 - e. To be able to arrange topics and subtopics in the light of his own purposes
 - f. To be able to summarize
3. To follow directions
 - a. To understand the value of keeping various steps in proper sequence
 - b. To read accurately, critically, slowly
4. To predict outcomes
 - a. To be able to foretell outcomes
 - b. To be able to estimate
5. To note details
 - a. To be able to remember
 - b. To read slowly and carefully
6. To read critically
 - a. To evaluate accurately
 - b. To detect propaganda
 - c. To evaluate without being prejudiced
 - d. To detect an opinion

- e. To detect a fact
- f. To understand value of copyright date
- 7. To remember
 - a. To understand that all facts and ideas cannot be retained
 - b. To be able to detect which facts should be retained
 - c. To understand that one reading usually is not sufficient to retain ideas
 - d. To state ideas in own words, not to verbalize
 - e. To outline materials to be remembered
 - f. To understand that it is imperative to put forth effort to remember
- 8. To use the library
 - a. To understand Dewey Decimal System of classification
 - b. To understand how to use different parts of book
 - c. To understand arrangement of cards in drawers
 - d. To understand how to use guide cards
 - e. To understand how to use dictionaries
 - f. To understand how to use encyclopedias
 - g. To understand how to use special reference books, Atlases, World Almanac, Reader's Guide, Junior Book of Authors
 - h. To understand how to use cross references
 - i. To understand how to make bibliographies

Reading Materials.—In order to control the various reading factors and reading skills when they are introduced, it is advisable to use a basic textbook. All children will not use the same textbook since reader levels of children vary. Slower children will use easier books while superior children will read more difficult books. In addition to readers, teachers should use all types of supplementary reading materials.

The laboratory for the reading skills is every reading experience which functions during the day. Locating information functions in content subjects as the children are seeking information for the solution of problems. In preparing a social studies report, appropriate materials must be selected and organized. In performing an experiment in natural science, great care must be exercised in following instructions. Newspapers and advertisements must be read critically in order to detect propaganda, opinions, and facts.

Speed in Reading.—Speed in reading is not a virtue in and of itself; speed without comprehension has no value. Investigations show that during the primary grades the rate of reading increases rapidly; in the intermediate grades the rate of increase slows down. The major factor in aiding children to comprehend material read is

not speed, but the acquisition of those abilities which function in comprehension, which in turn will speed up reading. Speed in reading is influenced by familiarity with material, difficulty of material, and purpose for reading. If a child is reading to remember, his speed will be slower than if he were reading only to get the general significance. If the ideas are unfamiliar and he must read carefully and critically to discover how the author is clarifying facts by having him turn to another page to study a diagram, picture, or map, or by directing him to refer to a footnote, speed in covering materials will be reduced. If he does not recognize words and must stop to analyze approximately six out of every one hundred running words, his speed will be reduced considerably.

Slow readers are penalized in many ways. Many children cannot cover their school assignments satisfactorily; they cannot acquire as much interesting information as they should like for the solution of problems in content subjects. Therefore, in order to help children to improve their speed in reading, it is the teacher's responsibility to guide the children in gaining better control over those factors which function in reading, such as ability to identify words, ability to use meaning clues, ability to apply reading study skills in all types of reading experiences which involve study, and to develop an understanding of how to adjust speed to various reading purposes.

In measuring the speed of the child's reading, it is not enough to base his rate only on easy material or only on difficult material. It is essential that information on reading speed be obtained by timing the reading rate for various purposes, using different types of materials and always checking on comprehension. The organization of an instructional program to increase the speed in reading-study experiences should make provisions for multiple grouping, thus making it possible to provide for the needs of each child. The real problem is to get the child to read as rapidly as possible and at the same time not sacrifice comprehension. One essential of a program to increase speed in reading is to provide children with much easy, interesting material.

Reading-Study Conference Period.—The justifications for a semiformal reading-study experience are to introduce a new skill, to develop word analysis techniques, and for drill in locating information. After the assignment has been clearly stated and anticipated class difficulties have been removed, the children go to work and the teacher gives individual help to children who need it. Following the study period there should be a group discussion period in which children and the teacher discuss the information that they have acquired,

the skills and abilities which they have used, and how the information and abilities may be used in other experiences. During this period the teacher also should clarify ideas that children do not understand, correct wrong impressions, suggest other ways of doing things and other materials which might be used.

Methods of Evaluating Standardized Reading Tests.—The measurement of reading achievement is a very complex problem. It is essential that all skills and abilities which function in the process of reading should be measured. Standardized tests present no difficulties if instructions for each test are followed carefully. Standardized tests should be used periodically for the following purposes. (1) to construct a reading profile for each child over a period of years, thus making it possible to compare achievement from one year to the next year and also to evaluate achievement at a given time in the developmental pattern of the child; (2) to locate difficulties; (3) to check techniques of teaching; and (4) to motivate the child.

The teacher should be conscious of the following limitations involved in standardized tests: (1) one test does not measure all reading factors; (2) interests in and adjustments to various types of materials are not measured; (3) since children may give the correct response by guessing, such responses do not necessarily mean that the child understands what he reads; (4) reading ability in contextual material that is being used at that particular time may not be checked; (5) the grade score is not a good guide in determining reader level of child—if a fourth grade child scores seventh grade reading level, it means that he is comprehending that material as well as an average seventh grader would interpret it and it does not mean that the child can comprehend ideas presented in a junior high school reader.

2. DIRECTING LEARNING IN CONTENT SUBJECTS

Through the content subjects—social studies, science, health, etc., the life of the child is enriched. Children are curious about beliefs, conduct of people, national affairs, elements in nature, and our control over our environment. For example: children in Colorado are interested in the conservation of our forests, in wild life, etc. They are interested in the needs of children of other countries. They are concerned about problems of our nation and the world. Children are working on such units as lumbering, coal, National Parks. During current events periods, they discuss the United Nations, UNESCO. In language arts they carry on correspondence with children in European countries to whom they are sending aid.



Teacher-pupil cooperation in health program.
(Learning in intermediate grades, Eugene, Oregon)

Intermediate grade children can understand the fact that all peoples are interdependent socially and economically. They accept change and experiences in an ever-changing environment. By learning to understand the likenesses and differences pertaining to religious beliefs, economic status, racial heritage within their own community and state, children acquire wider and broader understandings.

The times in which we are living make it imperative that units within the content subjects be organized in such a manner that children will develop those patterns of behavior which will be essential for living peacefully in this one world. It is also imperative that the teacher herself possess those attitudes and appreciations which are essential for the brotherhood of man.

By solving problems in content subjects based on units of interest a democratic procedure is followed since teacher and children work together in setting up problems, in planning for solutions, in working out solutions, and in making applications of learnings. By solving problems which are real and vital in the life of children in a cooperative and democratic setting children are learning to become good citizens of the world, to respect the opinions of others even though they do not agree with them, to work for the good of the group, to discover immediate problems, to evaluate on the basis of a worthy goal, and to appreciate the fact that it is the responsibility of every one to make contributions according to his abilities. By utilizing the environment and the community in solving problems, learning experiences in social living will have meaning and the child will understand that through cooperation much can be accomplished. Following is a brief outline of experiences which children should have in solving problems based on units in content subjects :

1. Using immediate environment in solving problems
2. Using human resources
3. Using all institutions in community
4. Using many kinds of audio-visual aids
5. Understanding art, music, dance, literature of many peoples
6. Using library intensively
7. Locating reference materials
8. Reading critically in locating information
9. Judging value of information
10. Interpreting maps, globes, graphs, diagrams, scales
11. Taking and organizing notes
12. Understanding directions and explanations
13. Comparing data from different sources
14. Formulating conclusions

15. Writing legibly and not too slowly
16. Acquiring a technical vocabulary in many fields of knowledge
17. Acquiring a good writing vocabulary
18. Knowing how and where to write for information
19. Giving a report in an interesting way

Child as an Individual.—In addition to making provisions for the social and intellectual development of the child, the teacher also must be interested in developing him as an individual so that he also can adjust himself to individual interests. The area of natural science can be organized for this purpose. If a child is interested in butterflies, he should be permitted to pursue that interest through reading, by studying pictures, by observing specimens, by making a net so that he can catch his own butterflies, prepare them for mounting, and exhibit them. Activities of this type also will demonstrate to the child the values of planning, of hard work, of persistence, and the feeling of satisfaction that follows the accomplishment of something well done.

3. DIRECTING LEARNING IN THE LANGUAGE ARTS

Language Development.—The groundwork of language for the intermediate grades is laid in the primary grades. The children have command over a speaking vocabulary and a listening vocabulary to such an extent that they are able to organize and to express their thoughts spontaneously to others in conversation and in discussion. They also understand that written language is a means of communicating with others, and is a means for keeping records which may be used at a later date. They have acquired the ability to write words legibly and to write simple sentences.

As children grow from early to later childhood their needs and desires become greater and their experiences more complex. The greater the number of experiences, the greater is the need for a larger vocabulary. Moreover, as the child matures his community enlarges, which makes it necessary for him to grow in the power of communication.

In developing an instructional program for oral and written language, it must be remembered that the laboratory for these skills includes every experience in which communication is used as a means toward some end. Thus the content of the study experiences should be based on abilities and skills needed by the children to communicate intelligently in all situations in and out of school. Standards of accomplishment should be determined by the children and the teacher.

If the children have a part in determining what is to be accomplished or the level of achievement to be attained, their motivation is increased.

Children's Needs.—The first responsibility of the teacher is to discover the needs and abilities of children in the use of oral language and written language. Some information may be obtained by administering tests of vocabulary, word usage, and sentence sense. By observing children at work and at play, word usage, sentence structure, control of vocabulary, self-assurance in expression, listening abilities, attitudes towards correct usage are discovered. Particular needs will vary from individual to individual.

After the teacher has discovered the needs of each child, her responsibilities are to know each child so well that she can give guidance whenever and wherever it is needed, and also to give encouragement every time the child shows any improvement.

Some time should be provided during the day for guidance in various abilities and skills needed by the child in oral and written expression. Those children who are above the standard in all language abilities should be excused from this period, and either should be made responsible for various contributions in social studies, devote the time to some creative project which is under way, engage in some original research based on a hobby, or be a critical listener for a group that may be preparing an oral report. During this period the teacher may be working with the class as a whole on class difficulties, such as presenting the form of an outline, outlining a selection, constructing a complex sentence out of several short sentences written by the children, etc. At another time, small groups may require help in placing a comma in a series of words, analyzing writing difficulties, discussing misspelled words, etc. For these experiences to be effective children must feel the need for the help, must have the desire to improve, and the desire to put forth effort in making the correction.

Organizations of Language Programs.—*Functional Center.* In the program based on functional centers, various learning experiences of the day will determine the skills and abilities needed. It may be that the children have decided to write letters requesting materials for a unit on transportation. If they do not know how to write a business letter, that problem determines the skills which will be developed at the particular time. If several children decide to interview a business man, probably those children as a committee will receive guidance in how to carry on an interview or the class as a unit may make suggestions and recommendations as to how the committee should proceed.

Possibly the committee conducts an interview with the teacher or a child before going on the mission.

Social Experiences. Grouping of children according to social maturity is based upon their experiential background. The difference between this organization and the functional center organization is that of degree. Social experiences include not only all experiences in content subjects but also many experiences at parties, clubs, or participation in paper drives.

Context Centers. Another grouping of children is based on context centers as organized in language textbooks. Arguments for this organization are that it is logical and follows a sequence which provides for an organization of the learnings with regard to subject matter. The organization of the textbooks should be adjusted to the ability and language development of children. An argument against these centers is that the learnings do not always relate to the needs and interests of the children.

Integrated Organization. Another procedure is that of integrating the functional centers, the social centers, and the textbooks. In this type of organization the textbooks are used as tools in developing those skills at the time or probably a short time before the children will be using certain skills. At any time that children are in need of a special skill they also should know where to get the information or help needed.

If in any type of organization the "outgoingness" of the children is increasing and they realize that they are growing in power of communication because they know how to evaluate their procedures, then the teacher knows that her guidance is successful.

Correct Word Usage.—Since children have acquired their vocabulary through the ear, the ear also becomes the channel through which incorrect usage is corrected. It is the teacher's responsibility to create an environment in which children will hear good usage, and in which they will feel free to use oral language and in which they have some means for self-evaluation. Many experiences can be planned in which children will gain group approval for having spoken well. Typical experiences in intermediate grades are telling about an actual experience, giving interesting book reports, or making a report on some matter which is of interest to them.

Correction of Errors.—Only a few errors should be attacked at a time. If children are attempting to keep too many things in mind they will become confused; satisfactory results will not be achieved

if children are constantly being interrupted in order to correct language errors while they are speaking. It must be remembered that the ideas or thoughts which the child is sharing with a listener or a group of listeners are the major issues.

Oral exercises may be provided by having the children's corrected sentences read aloud and by taking part in language games. Children who need the practice should not be eliminated because they made a mistake—they need the practice. The child may ask listeners for criticism on the effectiveness of his choice of words in expressing a certain idea. Much can be accomplished through personal conferences with children; the personalized interest of the teacher can be a great motivating factor; for if the child does not have the desire to improve, time and effort on the part of the teacher will bring very little progress on the part of the child. Recording reports and conversations and then playing them back in order to study and analyze word usage is a worth-while activity, particularly if several records are made and children can actually hear the progress which they have made.

Written Language.—To express one's thoughts in writing is a difficult task—so many mechanics are involved, including legible handwriting, spelling, punctuation, proper sentence structure, etc. Children must be given much help and encouragement. Principles which should be presented are use of different types of sentences, forms of verbs, plurals of nouns, case forms of personal pronouns, separate forms of adjectives and adverbs, punctuation, and agreement of verbs with subjects. If these principles are presented in the intermediate grades according to needs of children many errors will be avoided.

Errors in Written Language.—Many errors in written language are the result either of carelessness or of the writer's failure to understand the significance of punctuation and sentence structure. Periods should be provided when children set up standards for written work and also when they evaluate their work in order to learn how effectively they have been using these standards. Children also should form the habit of proofreading the materials that they write and of making their own corrections. The teacher frequently may guide them in locating errors through questioning or by giving hints, such as "Did you remember to capitalize all proper nouns?"

Handwriting.—By the time the children reach the intermediate grades, they have mastered the formation of the small letters and capital letters and can write legibly. However, many children find

that their writing can be improved. Occasionally children should exchange written work in order to check on legibility of writing and then devote some time to correcting their own errors. Standards should not be rigid; perfection according to the ability of each individual should be the requirement.

As the child gains control over letter formation and as he masters the spelling words, his speed will increase. Mass drill to increase speed is a waste of time. The goal should be to write at a fairly good rate and to write legibly. When speed is required in writing in vocational situations, the typewriter is used and not the pen or pencil.

Spelling.—The development of the ability to spell common words which the children use in their written language is a part of the language arts program. If the child is to do an effective job in written communication, he should be able to write the words automatically so that as he writes his ideas will not be blocked. In written language, children use a large number of common words and a smaller number of unusual words which are characteristic of the area in which they are writing. The unusual words used occasionally should be listed by each child in an individual spelling notebook, or the teacher should write the words on the board or have them posted on the bulletin board so that the children can refer to them whenever necessary. The common words which are missed in written work become individual “demons” and should be listed as such in the notebooks for special work, as these are the words which must be mastered.

Spelling Habits to be Developed.—In guiding children in their written language, emphasis must be placed upon being attentive to correct spelling of words while they write. They also should reread their written work in order to check spelling and better selection of words. If a child is in doubt that he has spelled the word correctly, he should know how to verify his spelling by using the dictionary. In addition to this, guidance must be given in developing spelling habits which should take into consideration the following factors:

1. Know the correct pronunciation of the word
2. Hear the letter sounds as the words are pronounced
3. See the sequence of the letters when the word is written
4. Use an analytic approach
5. Use individual clues in order to facilitate recall
6. Use generalization but pace it to maturity of child
7. Limit practice to essential words

8. Develop habit to discover the spelling of words by using the dictionary
9. Provide functional writing periods

Dictionary.—The ability to use a dictionary is a tool which is used in finding the meaning, the correct pronunciation, and the correct spelling of words. Therefore its use should have a place in the language program. Dictionary skills should be taught so thoroughly that the use of the dictionary becomes a satisfactory habit. The teacher should use the dictionary and thus set a good example for the children. If possible each child should own a dictionary, such as E. L. Thorndike's *Century Beginning Dictionary*, *The Winston Simplified Dictionary for Schools*, or *Thorndike Century Junior Dictionary*.

The ability to use the dictionary intelligently should be taught as a result of a need in other work; for example, when words are found in social studies or in reading. Children must understand that in the dictionary they can find the meaning, pronunciation, and spelling of words; they can find synonyms, antonyms, and information. Only one new skill should be introduced at a time. After the skills have been introduced and specific practice has been provided at a given grade level, review must be provided throughout the following grades in order to maintain the skill. The complex skills are introduced in the upper grades as the simpler skills are being mastered. The main dictionary skills should be taught in grades four through eight, inclusive. The instructional program should be based on the following points:

1. Use of various parts of the dictionary
2. Relative position of letter sections—d's in first quarter; w's in last quarter
3. Knowledge of the alphabetical arrangement of words and use of the knowledge in locating words
4. Use of guide words in locating the page and column in which word is found
5. Determination of definition appropriate for the use of a word in a given sentence
6. Coordination of definitions with the illustrations in the dictionary
7. Use of pronunciation key in determining the correct pronunciation of a word
8. Determination where a word may be separated into syllables
9. Determination of correct spelling of a word when some clue to its spelling is given
10. Use of dictionary as an aid to meaningful reading
11. Appreciation of the dictionary as a source of interesting and useful information

5. DIRECTING LEARNING IN ARITHMETIC

Today not only the business man and the public are concerned about the disappointing results of the teaching of arithmetic in the intermediate grades, but supervisors and teachers also are disturbed about the situation. Scientific studies have revealed that the major causes for this condition are the ineffective methods which are used.

Meaningful Learnings.—Much has been said about making arithmetic meaningful and significant. The primary teacher realizes that in order to make abstract ideas meaningful they must grow out of the children's experiences. She provides many concrete experiences by solving daily problems as they arise. Thus the children see the significance in what they are doing. Every elementary grade teacher has accepted the philosophy of learning through understanding in the teaching of new concepts in reading and in the content subjects. Within these areas of learning she plans for field trips, for real experiences, for experiments. She arranges exhibits and pictures on the tables and bulletin boards. Since this method produces results in these areas of learnings, why would not the same techniques be effective in the area of arithmetical learnings? Why not solve some of the problems which arise daily with the children? For example, Bank Day offers many learnings, such as

1. Handling money
 - a. The child must decide how much money to bank out of his allowance.
 - b. If the child makes more money by doing odd jobs, the amount deposited may vary.
 - c. Listing and estimating costs.
 - d. Making comparisons in regard to amount saved annually by depositing $\frac{1}{2}$, $\frac{1}{4}$, $\frac{3}{4}$.
 - e. Making change by depositing and withdrawing money.
 - f. Identifying currency and bills.
 - g. An appreciation of budgeting our income.
2. Banking terminology or technical terms
 - a. What does it mean to credit and debit an account?
 - b. Terms clarified—interest, principal, rate per annum.
 - c. Using new terms in discussion periods.
3. Rote counting
 - a. Understanding that if we cannot recognize number in a group by identification, then we must count.
 - b. "How many will have money to be banked today?" If four children stand up the number can be identified, if twenty out of thirty-five stand then they must be counted.

4. Figuring percentages (for superior children only) and miscellaneous work
 - a. Making graphs, such as comparing deposits of last week with this week.
 - b. Finding averages, such as "What is the average amount deposited per room?"
 - c. Figuring totals—how much money was deposited this week, etc.

Why not have an arithmetic display table and work table? Why not have displayed on the bulletin board graphs and pictures representing arithmetical facts and information? Social phases of arithmetic which are presented in textbooks should be supplemented by making observational trips, by placing pictures on the bulletin board, by showing exhibits of points presented. A discussion period based on the social setting would be worth-while and should be considered as an arithmetic and oral language experience. Experiences of the children that parallel those presented in the textbooks should be discussed at the same time.

Number System.—The emphasis which is being placed upon meaningful arithmetic also includes the ability to understand the content of the decimal number system. Manipulative materials which may be used in developing an understanding of the basis of ten are the abacus and tooth picks and rubber bands. Basic principles to develop are as follows:

1. Our numerals always have the same order.
2. The first nine numerals are thought of as a collection of ones.
3. Ten is thought of as a single entity.
4. The base is ten which means that the standard of grouping is ten.
5. The groups of tens have the same order as the first nine numerical symbols.
6. Place value functions in the writing of numbers.
7. Place values are units, tens, hundreds, etc.
8. Zero functions as a place holder.

It must be remembered that acquiring an understanding of our number system is a slow process; as the children mature and advance in an understanding of place values in the fundamental processes, the number system will take on deeper and wider meaning for them.

Readiness for Arithmetical Processes.—Basic to all work in arithmetic is an understanding of the fundamental processes and the ability to perform the four operations with whole numbers, fractions, and decimals. By administering tests which check the skills involved

in a process, a teacher will know whether or not the child will meet with success. For example, readiness for long multiplication requires an understanding of following skills :

1. Understanding of place value of numbers
2. Understanding the multiplication facts
3. Understanding how to add and to carry
4. Understanding where partial products are placed, and why

Whenever the child has an insight in a specific relationship of numbers and it is a step to an understanding of a process, he should be guided in making use of that understanding. For example, if a child discovers that by adding 3 three's it is the same as 3 times three, or that 2 and 2 and 2 are six is the same as saying 3 two's are six—that child is ready to begin working on simple multiplication facts.

Drill or Practice.—There is a place for meaningful drill in the arithmetic program. After the child understands the process or procedure and understands the need for making correct responses, he is ready to practice those skills which need to be mastered. Drill may be used in order to gain better control over a new skill or process, to recall skills and processes, and to maintain or keep a process alive. An effective drill or practice period is based on the following principles :

1. Drill must follow understanding.
2. Children must have a felt need for the drill.
3. Child must go to work in an aggressive and attentive way.
4. Each child must be working on his own individual needs.
5. Children must know what the response pattern is to be.
6. Children must have a means whereby they can check to see whether their responses have been correct.
7. Provision must be made so that a child can correct the error immediately if he has made an incorrect response.
8. Periods must be short.

Problem Solving.—In order for the child to be able to do any reflective thinking in solving an arithmetic problem in a textbook, it must have meaning for him. Problems should make sense in terms of the learner's previous experience and should be within the interest and understanding of the child. He should be able to read the material without being blocked by unfamiliar terms or concepts. Occasionally it may be necessary to skip problems; the textbook is a tool and must be fitted to the child.

A very important factor in problem solving is to have an environment in which the child can keep his mind on his work. No child

should be emotionally upset or disturbed by worrying about the grade that will appear on his paper, or by having to miss his play period because he has not completed all problems. The major concern of the child should be, "What am I trying to find and how will I find it?" In guiding children in problem solving the following steps are recommended:

1. Read the problem to get the general social significance.
2. Reread the problem to get the arithmetical problem
3. Organize data by noting relevant and irrelevant facts; if additional information is needed then seek it.
4. Interpret data on basis of what is to be found.
5. Estimate the answer.
6. Solve the problem.
7. Check with estimated answer.

Evaluation.—The evaluation of children's ability to solve problems in arithmetic and the evaluation of the teacher's instruction is a very complex job. Many factors must be considered, such as understanding of technical vocabulary, understanding of combinations in four processes, understanding of number system, understanding of four processes and computational ability in the same, understanding of fractions and decimals, reading ability, and ability to organize information in problems. Problems should be checked on two points, procedure that was used and correct computation. It is very unfair and upsetting to the child not to receive credit for having analyzed the problem correctly and for having used the proper procedure. Problem solving is more than getting the correct answer. The reflective thinking that the child has done is of great value.

Teacher's Devices. Every teacher evaluates the daily work of children by at least checking the correctness of the answer. Frequently children are asked to explain their work orally, which is a good device to use in order to see if the child understands why he used a particular process. Tests may be made by teachers to check on computational ability and technical terminology.

Textbook Tests. Modern textbooks include a good testing program which usually is superior to the teacher's testing program. Authors of textbooks are conscious of many factors which should be considered in an evaluation program. They are making provisions to check the child's readiness for new work by presenting readiness tests before the new work is introduced, thus making it possible for the teacher to know which children can go ahead, which need experiences to clarify basic concepts, and which need to do some remedial

work before they can take up the new work. Provisions also are made to discover individual needs by including diagnostic tests. Many tests provide for review and for recall which is part of a maintenance program.

Standardized Tests. Standardized tests are effective instruments in diagnosing needs of children (diagnostic tests) and in graphing the growth of children (achievement tests) over a period of time, thus making it possible to compare children's developmental patterns at different stages of development and to note how varying conditions influence the child. A few of the many standardized tests are listed as follows:

1. *Compass Diagnostic Tests in Arithmetic*. Chicago: Scott Foresman and Company.
2. *Iowa Every Pupil Tests of Basic Arithmetic Skills and Problem Solving*. Boston: Houghton Mifflin Company.
3. *Los Angeles Diagnostic Tests*. Los Angeles: California Test Bureau.
4. *Metropolitan Achievement Tests*. Yonkers, New York: World Book Company.

Individual Differences.—To provide for individual differences in arithmetic is a very difficult problem. Children vary in mental ability, in the mastery of combination facts, and in the understanding of all skills that function in each process. Procedures that have been found to be effective in providing for individual differences are (1) multiple grouping, (2) differentiated assignments, (3) individualizing the work, (4) reducing requirements for slow learners, (5) increasing requirements for fast learners, and (6) use of concrete materials.

It is obvious that all areas of learning—reading, content subjects, language arts, arithmetic—are interdependent. Children must achieve success in all if they are to be well-adjusted individuals. All children will not reach the same level of achievement, but with the wise guidance of a teacher each child should reach that level of accomplishment which is possible within the limits of his ability.

QUESTIONS, PROBLEMS, AND EXERCISES

1. Discuss the purposes which reading serves in the school.
2. Prepare a ten-minute talk on "Teaching reading in all areas of learning in the curriculum."
3. Prepare a five-minute discussion on the value of considering punctuation as sentence elements.

4. Which is the more effective method of forming good handwriting, the use of a drill book or the careful revision of the child's own writing? Defend your point.
5. Discuss the major problems in developing the ability to spell.
6. Prepare a talk on "Reading, language, spelling, and writing functioning as an integrated experience."
7. Prepare a list of arithmetical exploratory materials.
8. Suggest procedures of guidance in helping children to use the library.
9. Discuss possible handicaps in putting over an effective health program.

Chapter 11

SOCIALIZED DISCUSSION PROCEDURE

1. CLASS RECITATION VERSUS CLASS DISCUSSION

Many persons still think of classroom activity, particularly in the intermediate and upper grades, as consisting of teacher questions and student answers covering a preassigned unit of subject matter taken from a textbook. The objectives, or at least the outcomes, of that type of procedure are (1) to check on the degree to which the individual students have acquired temporarily the ability to recite facts taken from the assigned material, (2) to motivate study of the assigned material, and (3) to promote learning by verbal repetition and by listening to others recite.

Whatever may be achieved by the recitation in the way of testing a limited type of learning outcomes, it is a wasteful learning activity. Typical of what goes on in many classrooms is the following:

The teacher sits or stands at the front of a classroom occupied by twenty-five boys and girls. A book is open on the teacher's desk near by, or perhaps she holds it in her hands. Perhaps it is a lesson plan that she holds instead of a book. In the corner at her right is a map on a tripod. The pupils seated at desks are scattered about the room. Some have slid under the desk somewhat, their backs adding hypotenuses to the right angles formed by the seat and the back. They toy with pencils or with the book covers. A few are writing. One is looking over an arithmetic paper he is to hand in later. Some are gazing out the window. Others are tracing initials and figures on the desks.

The teacher asks the class "How did Abraham Lincoln spend his youth?" and calls on Henry who says "Splittin' rails." She frowns and calls on Richard who says "He was a rassler," and then on Donald who responds "He clerked in a store." Desperately she calls on the "best" student who says piously, "Abraham Lincoln didn't waste his time. He spent his youth reading good books by the light of the fireplace."

The teacher now is discouraged and irritated. "Haven't you read the lesson? Open your books. There at the top of page 243 don't you see it says 'Abraham Lincoln spent his youth in extreme poverty.' Now for tomorrow take the same lesson and two more pages, and for goodness' sake read it more carefully."

Books close eagerly: William's book falls to the floor. Lillian starts with a little "Oh" and others are amused. One giggles. James yawns and writes on a piece of cardboard. "Oh, gosh!" and the "learning" activity in fifth grade history is at an end

To be sure the trend has in recent years been definitely away from this sort of "recite-ation" procedure. Nevertheless, many teachers have not gotten very far away from it. And most parents who were "taught" the same way make no violent protest. In fact, some approve it. It should be obvious, however, that the recitative procedure, however useful at times, especially when mixed in with discussion and study of a more purposeful and of a more active and better motivated type, may be of educational value, but possesses several serious limitations.

Limitations of the Traditional Recitation Procedure.—Because of the educational importance of these limitations of recitative procedure, it is being replaced in the upper grade levels by group discussions, visual aids, group activities of a more lifelike type, and other more effective activities, mental and physical, and particularly by activities of a more socialized and socializing nature, which are performed with much more enthusiasm and hence are more effective as learning experiences.

For the purposes of learning, the traditional recitation possesses a number of serious limitations. Among them the following may be mentioned:

There is a lack of cooperative effort. The relationship between individuals is principally one between the teacher and individual pupils in rotation. The relationship between pupils is one of competition, not cooperation. The responsibility of the pupil is to the teacher, not the group. The appeal is to rivalry, not to a spirit of mutual helpfulness. Pupils are trained to profit by the failures of their fellows. The concomitant outcomes of such activities, including the effect upon permanent interest in the subject, are not desirable.

Undesirable pupil-teacher attitudes are developed. The student not infrequently comes to think of the teacher as a taskmaster for whom unpleasant work is performed. He suffers from the teacher's chiding and low marks. Usually what feeling of common interest there is among the pupils of the class is of mutual sympathy as among victims of a common aggressor—an attitude not favorable to wholehearted interest in learning activities, but indeed one which may upon occasion of real or imagined unfairness blaze into open resentment.

The teacher finds it difficult if not almost impossible to become regarded as a guide and an aid to the learner—a friend and helper rather than a tyrannical inspector.

Such procedures do not generate pupil responsibility. Where traditional recitation procedures are employed, the learner comes to concentrate not upon his own growth or that of others but upon satisfying the demands, arbitrary or otherwise, of the teacher. One might think that only the teacher was to profit by what goes on and that pupils participate only because it is their misfortune to be in school. The responsibility for pupil growth seems to devolve upon the teacher. The student is primarily responsible for nothing except getting by. He conceals his weaknesses from the teacher as well as he can, thereby defeating efforts of the teacher to diagnose learning and to correct misunderstanding.

It does not develop initiative and originality. There is not present in conventional reciting a favorable opportunity for developing initiative and originality. The teacher is the leader. She does all the planning. She does not ask for original ideas or initiative. She daily puts a premium upon obedience in learning the ideas of others. Initiative and resourcefulness are, in fact, repressed.

It rarely trains in independent thinking and judgment. No premium is placed upon open-mindedness, critical evaluation, or the development and exercise of judgment. In fact most commonly no great effort is made to promote understanding. In the effort to cover the "lesson" there is time only for quizzing for reproduction of words.

It does not develop healthy interest and attention. Because of the failure to provide for learner initiative, the lack of opportunity for discussion, and the lack of provision for individual expression and questions, the procedure is not conducive to the development of interest in the subject. Much more often just the opposite effect is produced. The subject-matter medium inherits the odium attached to the authoritative method. Very often the pupil feels no responsibility for an interest in what goes on except when he is called upon, and by that time has let his mind drift to other matters.

In recent years many teachers have recognized the limitations of the old recitation procedure, and various other types of activities have largely displaced it in the classroom, including more study and other learning activities and more discussion and other socializing group procedures. The remainder of this chapter will be devoted to the philosophy, principles, and procedures of these social group procedures.

2. TYPES AND VALUES OF SOCIALIZED PROCEDURE

Two movements toward socialization have definitely changed modern teaching methods. One has been socialization of the activity of the class period; the other is the organization of content subject around units of learning, a method which directs the child's efforts by means of a new and entirely different type of working assignment. The first has come to be known as the *socialized recitation*, and the latter as the *activity* or *experience method*. Socialized class procedure and the use of problems in units of work are reactions to the artificiality, the repression, the perfunctoriness, the deadliness of the ordinary type of school recitation and the accompanying lack of provision for stimulating initiative, originality, and self-expression.

Aims and Values of Socialized Procedure.—Skilful use of socialized procedure will tend to:

1. Encourage the pupil's feeling of responsibility for his own progress.
2. Provide a favorable situation for the growth of good will between pupil and teacher, thus humanizing the unnatural role in which the teacher is usually cast.
3. Cause the pupil to focus attention upon the goals of the work being done and not upon satisfying the teacher and securing good grades.
4. Develop in the pupil the attitude and habit of helpfulness—the desire to promote the objectives of the group.
5. Develop skill in cooperation and suppress individualistic tendencies which may develop ill will.
6. Develop the habit and power of initiative and self-reliance.
7. Encourage more effective methods of work, e.g., the use of outside references and the project method.
8. Promote skill in clear thinking, in proper methods of thinking procedure, and awaken an attitude of open-mindedness and suspended judgment.
9. Foster skill in oral expression through interested discussion.
10. Develop ability to use freedom profitably—to manage one's self through the gradual introduction to responsibility and the gradual removal of restraint and compulsion.
11. Acquire certain conventions and social attitudes, such as consideration for others, politeness, willingness to give and take criticism, etc.
12. Create a more impelling interest in learning the subject through more natural participation of the pupil in discussions and by giving the pupil some self-direction of his energies and his activities.

13. Make the class period contribute more effectively to mastery of the subject matter through the use of a correct psychological approach and the consequent stimulation of a higher level of attention.
14. Formulate procedure more in the light of the needs of pupil nature and the satisfaction of natural tendencies such as inclination to construct and manage, desire for imitation and dramatization, preference for novelty and variety, and propensity for group endeavor.
15. Provide opportunity for pupil-teacher relations to be carried out in a natural manner which will give the teacher a better understanding of the pupil's mind at work.
16. Provide natural stimuli for the pupil to excel, to wish to lead, and to contribute his best to the class procedure.

The foregoing aims are stated largely in terms of growth of the learner, rather than in terms of "mastery" of subject matter, that is, not in terms of the temporary acquisition of geographical facts, but in terms of such things as attitude, ideals, and skills contributing to good citizenship and healthy, vigorous personality.

Such philosophy does not contemplate that children will not learn geography facts, literature, or other content matter. Indeed it is to be expected that there will be increased interest in subject matter, more wholehearted learning activity, more complete understanding, and more permanent learning and interest. Experimental investigations indicate that where socialized procedures are introduced, learners make higher scores on subject-matter tests.

Very frequently class procedure may profitably gravitate toward the socialized discussion without definite planning or radical reorganization. Indeed, it is the natural tendency for work to become socialized in some respects, and only the formalism of the teacher prevents this. A skilful teacher can make the transition with no consciousness on the part of the pupils that any innovation is taking place. The class control only needs to become more natural, which means that teacher and children are working together.

More progressive teachers in the elementary school find an occasion almost every day, often several times a day, when it is profitable to carry on informal discussions—discussions of what they are reading, of home life, of things happening in school or in the community, of phenomena of nature, especially in the spring and in the fall, after rains, snows, or freezing spells, of games and recreational activities, of health problems, and of customs and etiquette. In fact, the more effective teachers in the primary grades use a very large part of class

time in informal discussion. In addition to being an effective way to teach elementary science, social studies, health and safety education, social behavior, and the use of numbers, it affords an excellent opportunity to extend and organize the experiential background of little persons and to develop readiness for reading arithmetic and the language arts.

Where a discussion procedure is employed, its very naturalness and spontaneity recommend it. Children speak when they wish to express their ideas or ask for explanations, rather than when they are called upon. This opportunity for participation at the right moment serves to stimulate interest. Probably because of the opportunity, and because of the natural and psychological development of the topic under discussion, interest evidenced of members of such groups is distinctly superior to that of the ordinary recitation.

3. COMMONLY USED TYPES OF DISCUSSION PROCEDURES

Learner Participation.—In her planning the teacher provides for individual interests and needs of the children, prerequisites in making it possible for the children to participate in planning, in organizing materials, in collecting information, in making suggestions, and in evaluating results. During the discussion the teacher may ask for information, for reports, and she also should defend the child who is being criticized unjustly by the class. The children may volunteer to bring in materials from outside the school, to ask questions, to present and to ask for information. During the discussion conclusions are reached and generalizations are stated, and probably new problems will be developed. Every individual has participated.

It has been a good learning situation if the majority of our answers can be in the affirmative for the following questions :

1. Did the problems originate within the group?
2. Did the children do any reflective thinking?
3. Were the problems important?
4. Did the majority of the children participate?
5. Were all the children vitally interested?
6. Can varying procedures used in solving problems be used in solving other problems?
7. Did children try to understand the point of view of others?
8. Were conclusions reached? If not were the children willing to wait for more evidence and information?
9. Were the children courteous?
10. Did the teacher enrich the discussions with information that was not accessible to the children?

11. Was the teacher tactful in keeping children on the point?
12. Did the teacher encourage the timid child to make a contribution?

Panel Discussions.—Panel discussion is often used to excellent advantage in intermediate and upper grades, the maturity of the children determining the nature of the responsibility of the participants. It may be employed both with controversial topics and with non-controversial materials. When it is employed with a controversial subject, an effort should be made to select members of the panel of discussion leaders so that each of the major probable positions on the question will be presented, including the neutral or middle-of-the-road position as well as the different extreme positions. Care should be taken to see that all sides have equally able advocates and that there is opportunity for rebuttal.

The panel discussion may be employed to present different parts of a unit, problem, question, or topic in which there is no central controversy, e.g., different portions of a historical period, or development of a topic in science, or different aspects of a play or a short story. Whether or not a summary of the discussion is necessary or advisable depends upon the nature of the particular topic.

Until members of the class acquire experience with the panel discussion, the teacher should act as moderator or chairman. Students later selected for the purpose may take over and direct the discussion. Almost invariably the discussion should be followed by a critical evaluation or summary by the teacher or one of the pupils. The spirit and purpose of this evaluation or follow-up are twofold: (1) to bring out points neglected in the discussion and (2) to enable participants in future discussions to adopt the merits and avoid the weaknesses of the discussion just held.

The panel discussion often is referred to by some other title, such as town hall discussion, junior town meeting, group discussion, or forum. Debates in class are often so organized as to include open discussion after the leaders have participated. There is a national Junior Town Meeting League which fosters discussion of current affairs by youth. The organization issues small publications, including a handbook on discussion techniques for school forums, class discussions, and youth groups.

Among important suggestions and techniques recommended in the handbook of the Junior Town Meeting League ¹ are the following:

1. If a speech is necessary (either written or delivered from notes), it may include the following elements:

¹ *Make Youth Discussion Conscious*. Junior Town Meeting League, Columbus, Ohio, pp 18-20.

- a. Through a brief introduction, beginning with a simple illustration of what the problem means, the scope of the speech should be limited, difficult terms defined, and the stand being taken made clear. Use one or more brief and pointed remarks that indicate clearly the exact viewpoint of the speaker and how he differs from others.
 - b. The main body of the speech should present a logically ordered résumé of the essential evidence upon which the speaker's view is based and the inferences or deductions drawn from this evidence.
 - c. The conclusion need not be a summary of the points made—it should, however, make clear how the facts and the inferences lead to the speaker's convictions on the question under discussion.
2. Tell stories or give illustrations in a friendly, rather confidential manner
 3. Use at all times a conversational—not an oratorical—style. Even though you may be on a platform, talk *with* and not *to* your audience. Or, talk as though to *one* listener, personally and sincerely.
 4. Use everyday language. If the five-cent word will say it, use it. It will be much more effective than the ten-dollar word.
 5. Keep remarks as objective as possible, remembering always to label opinions as such.
 6. Make all statements explicit and concise, and address them directly to the audience—not to any individual, even if in answer to his question.
 7. Seek responses from the audience members—applause, laughter, or even cries of protest.
 8. Do not be disturbed by an emotional outburst from the audience. When it has subsided, proceed from where the statement was interrupted.
 9. Appear at ease—relaxed. A deep breath before speaking is a good rule to follow.
 10. Dispense with formalities. Plunge at once into the remarks to be made. Don't say, "Mr. Chairman, distinguished guests, worthy opponents, ladies and gentlemen."
 11. Stand firm and still—don't move about. Put all energies into making a forceful statement. If seated, speak with force and precision but at less length at any one time than if speaking from a standing position.
 12. Discussion is more stimulating than speeches. Jump in eagerly with your contribution when you have something to say. Have a good time.

Preparing the Audience

Aim toward :

1. Accuracy in speech and thought. Don't generalize or jump to hasty conclusions. Define your terms.
2. Open-mindedness or flexibility of point of view. Be willing to alter your opinion if the evidence changes. Don't argue for argument's sake alone.
3. Tolerance toward the opinions of others.
4. Skepticism toward information which is new and untried, or second-hand. Stick to tested facts. Challenge the authority behind a statement.

5. Intellectual honesty—the ability or willingness to stick to exact factual material regardless of the strength of previously presented views or ideas. Don't rely upon emotional arguments. Don't appeal to prejudices
6. Suspended judgment. Be willing to hold off your final judgment on a problem—or some aspect of it—if more facts are known to exist.

4. FUNDAMENTAL PRINCIPLES

Dangers to Be Avoided.—Whatever type of socialized class procedure is to be employed, certain cautions should be observed. Successful socialization is no task to be attempted by a weak teacher. Teachers without good qualities of leadership, ingenuity, and industry should be satisfied with other methods of teaching. Among the cautions which may well be kept in mind are the following :

1. Avoid the practice of merely turning the class over to bright pupils. This does not develop cooperativeness and does not challenge the other learners.
2. Be careful that the timid or lazy learner does not become a mere listener ; draw all learners into the discussion.
3. Avoid overemphasis upon excessive formality and technical parliamentary procedure.
4. Avoid monopoly of class time by a few learners.
5. Do not permit excessive rambling discussions and pointless digression.
6. Controversy in the class is frequently desirable, but do not permit it to result in fixed attitudes or prejudices.
7. Above all, guard against excessive supervision and teacher domination.
8. Be careful that the major items or points in the course are not omitted or neglected.
9. Do not worry if matters of minor importance are not all covered in class discussions.
10. Avoid at all times superficial or ineffective socialization which serves in no way to facilitate dealing with the work at hand.
11. Avoid the development on the part of learners, by reason of their authority while in office or of participation in controversy, of unsocial habits, manners, or attitudes.
12. Insist upon the growth of the students toward self-discipline ; socialization is not anarchy.

Some of these points which merit special consideration are discussed in the following paragraphs.

Avoid Monopoly by a Few Learners. In all socialized or group discussions there is a danger that the more intelligent and aggressive

pupils will do all the talking. Whenever human beings gather in groups for any purpose, it is not long before one or two have assumed leadership and pushed others more or less into the background. This is readily noticeable in adult business, civic, and social groups, as well as among children. The traditional recitation suffers from the tendency of a few pupils to monopolize the class hour. If not carefully managed, the socialized recitation may easily make matters worse, since the teacher is no longer in a position to encourage all members of the class to participate. This situation has frequently been encountered where socialized procedures have been employed. Domineering and officious pupils may cause such a situation, and even conscientious pupils who have their minds set on the success of the procedure may disrupt the plan.

If the situation is created by a domineering pupil who fails to respond to ordinary strategy in the routine of the class, he should probably be handled like the occasional pupil who is a clown or a humorist. A frank private conference should be arranged. The pupil who will not "socialize" after such procedure has been resorted to and appeal has been made for cooperation and fair play should be subjected to such measures as are commonly employed for disciplinary problems where the usual recitation plan is being followed.

The slow or temperamental pupil should not be discouraged. Where the formal plan of procedure is employed, special coaching of the student leader along this line is often necessary.

Avoid Irrelevant and Ineffective Discussion. There is a need for guidance by one who has a sense of values and proportion. Careful coaching of student leaders will operate to reduce the amount of pointless discussion. It will become necessary for the teacher at times to participate in the discussion long enough to direct the thinking back into more profitable channels. Of course this must be skilfully though firmly done, with no evidence of irritation. If learners were highly skilled in discussion there would be much less need for socialized procedures. Much superficial discussion can be avoided if it is preceded by a careful and thorough examination and study of the facts pertaining to the topic.

Avoid the Dangers to Which Controversy Is Susceptible. Controversy leads often to emotionalism, clouded thinking, and premature and fixed conclusions. It may serve to fix definite attitudes on questions upon participants and even upon listeners, and to blind them to those considerations which do not contribute to their point of view. Often a controversy reaches a point where no new material is de-

veloped, and continues as a reiteration of previously considered points and arguments. Also, if not managed well, it tends at times to transcend the bounds of polite discussion and to engender individualistic acts and feelings which contribute nothing to the development of that social spirit which should characterize all socialized procedure.

Avoid Dominating the Discussion. The teacher should constantly restrain herself from a natural but unfortunate tendency to monopolize the discussion. Many instructors are unable to stand by and see the work apparently "go to pot." It is natural for the teacher to overestimate the importance of and need for her own contributions. It is difficult to realize that the shortest way may not, in the long run, prove to be the most economical way. The learners must participate, even though they do make mistakes. Even the most scholarly presentation and explanation by the instructor often do not result in the most satisfactory learning. The values over and above subject matter of the socialized recitation are important and should not be lost sight of. The development of initiative, thinking power, right habits, power of expression, ideals of polite conversation, cooperativeness, and similar special outcomes of the socialized procedure should not be lost in the process of acquiring a better grasp of information. The teacher must studiously avoid cooling student interest and depriving students of their opportunities to think for themselves and to develop initiative and capacity for judgment.

Exercise Care to Obtain Adequate Selection and Organization of Subject Matter and Proportionate Emphasis on Important Points. While following the text or course of study closely is not essential or even highly desirable, it is essential not to omit or neglect the items and sections which contribute most materially to the objectives of teaching or studying the subject. The teacher must assist students in achieving adequate and proportionate emphasis.

In many classes where socialized methods have been used, a "summarizer" is appointed who at the close of the period organizes and sums up the discussion, giving emphasis to points needing class attention. A student, the leader, or the teacher may serve as "summarizer."

Thoroughness in important matters must be achieved. Drill is necessary many times in a socialized recitation. It can be made more interesting by suggesting that students drill each other by means of games, as a preparation for a group contest, or in order to reach a certain standard or pass a certain test.

Avoid Superficial and Nominal Socialization. There is no merit in the mere form of socialization. Merely turning a class over to student representatives or permitting students to conduct recitations does not in any sense of the word constitute socialization. There is always the tendency to emphasize the showy, the spectacular, the unusual, and the material phase of any new movement in teaching. Neither the real objectives of the socialized recitation nor the subject being taught can be disregarded. Where this is done the "socialized recitation" will soon degenerate into a type of activity of less value than the conventional recitation, the activity consisting largely of mechanical and trivial corrections of students by one another.

This caution applies particularly to the use of some formal pattern of organization for socialization. Where the mere form is imitated, little understanding of the real spirit and fundamental principles of the movement result. The educational results prove unsatisfactory, causing parents and teachers soon to lose faith, regard the procedure as only another fad, and thus fail to realize its true social and educational significance.

Certainly a discussion which consists chiefly of following parliamentary procedure, heckling, or arguing over trivialities is not socialized procedure. Its net outcome may be antisocialization. If true socialization is to be accomplished, care must be taken to see that cliques, inner circles, and groups of friends among the students do not operate to control the selection of officers or to interfere with normal democratic discussions.

Problems of Discipline.—The problems of maintaining conditions favorable to effective learning are not eliminated in socialized procedure. Socialized procedure does not mean disorder. It means, rather, an orderly program carried on in an orderly manner by orderly students. Socialization does not contemplate permitting the class to follow its own devices and whims. Of course there will often be confusion, when socialized methods are introduced, while new procedures and new responsibilities are being learned. This is a usual characteristic of any new plan of procedure, and final judgment should await a fair trial, one which will give the teacher and student time to develop proficiency in the method.

Provision must be made at the very outset for training the group in proper methods of procedure. Not more than one student should talk at once, each being permitted to conclude his remarks without interruption or interference. The time element for worth-while discussion should be remembered. Courtesy, kindness, and fairness

must be observed. Scolding or sarcasm should not be resorted to; a smile or a look of disapproval may serve much better than words. The integrity of the group must be preserved—the group spirit—the “we” spirit. All this requires skilful and tactful management, even more so than in the traditional recitation.

Teacher-Pupil-Leader Conferences.—If at any time the teacher is to transfer part of her responsibility for leadership activities to student leaders, there will usually be need for special planning with the students. There will be need of discussing with the chairman or student leader such points as the following:

1. Nature of the activities to be undertaken
2. Relative emphasis upon various topics and important points
3. Procedure contributing to an equalization of opportunities and responsibilities within the class
4. Plans for obtaining and retaining the cooperation of indifferent members
5. Advisability of the use of visual and auditory aids
6. Procedures for fixing facts and developing skills
7. Procedures for summaries and diagnosis of difficulties
8. Adaptation of activities to the needs, abilities, and interests of individuals

Certainly at the outset, and to a limited extent later on, it is wise for the chairman and the teacher to work out a fairly detailed plan of procedure, much like a lesson plan. As soon as possible the chairman should take the initiative in such plans, work them out, and then present them to the teacher for approval and suggestion. The detail and the frequency of these conferences will vary with the maturity of the class, with the resourcefulness and personality of the officers, and with the nature of the work to be done.

Distribution of Leadership Opportunities.—The opportunities and responsibilities of leadership should be widely distributed. Even the least promising and indifferent children should have some part in it. In order to avoid the pitfall of monotony and ineffectiveness, officers should be changed frequently and whenever there is a natural break in the plan.

There may be occasions on which it will seem advisable to employ a more or less formal plan for merely a portion of a class period or for one or two class periods. The formal plan may be employed in current events, radio program, assembly program, a culmination of a unit.

The teacher needs to give some thought and attention in advance to each day's class period. Careful daily planning and knowledge of subject matter are requisite for the instructor. It is necessary that she acquire skill in directing the trend of the discussion by raising, defining, and modifying questions and problems and by keeping the class as much as possible in a problem-solving attitude. She should refrain from settling questions by authority; rather she should lead the class to think them through. She must give attention to developing a truly socialized situation.

One evidence of a truly socialized class is that members of the group address themselves to the group rather than to the instructor. The teacher-individual relation must give way to a project-group relation. Until this result is accomplished at least in part, no truly socialized atmosphere can be obtained; it is often difficult to accomplish, and the instructor must be aware of this need from the start. The socialized group relation is not brought about so much by precept as by making the discussion of such a nature that it will be natural for each pupil to address his fellows. A favorable seating arrangement, such as around a table or in a circle, is very useful and is very common in the primary grades today.

Teachers will need to experiment with the new method and gradually to perfect their skill in its use. Pupils too will require some time to perfect the use of their privileges of initiative and to grow into their responsibilities. In many instances the use of a socialized method will mean a temporary loss in "discipline," and possibly in subject-matter learning as well. However, this is only the first step toward an ultimate gain of the powers of independent study and of permanent interests, which will continue to function long after the special subject matter has sunk below the power of recall.

QUESTIONS, PROBLEMS, AND EXERCISES

1. List in the order of their importance the weaknesses of the traditional "recitation."
2. List in order of their importance the values of "socialized" procedure
3. What do you think of the statement that "discussion takes too much time," so that only part of the "lesson" can be covered in class?
4. Indicate how you would avoid the main difficulties which may be expected in group discussion.
5. Prepare a ten-minute talk on "Characteristics of a socialized classroom situation."
6. In what way does the teacher's personality affect the socialized procedure in a classroom?

7. Describe children's activities in a socialized class activity.
8. Describe the teacher's activities in a socialized class activity.
9. Discuss the effect of informal grouping or seating in a socialized procedure.
10. Plan a panel discussion for some elementary school subject.

Chapter 12

FUNCTIONAL UNITS FOR TEACHING AND LEARNING

The method used in directing the learning of children should be determined by the nature of the learner and the conditions in the community of which he is a member. Whatever is learned is acquired because the individual himself does something about it and, as a result of the doing, the individual acquires certain behavior patterns. Purposeful learning is integrated learning; facts, skills, attitudes, appreciations are developed not as separate entities, but as parts of a whole experience. Children also vary in rate of learning, in their needs, and in their aspirations. Children learn most effectively if what they are doing has meaning for them and they understand the significance of it. The society in which the children live requires that they acquire those attitudes, appreciations, and work habits which will enable them to solve problems as they face them. In order to assist children to establish behavior patterns which are essential to satisfying living with themselves, their friends, their immediate neighbors, and their world neighbors, it is imperative that every school assume the responsibility of providing those learning experiences in which children will learn how to meet the problems of today, how to follow directions and how to make choices, and how to make contributions to society.

The modern school of today guides the child in experiences basic to the acquisition of behavior patterns characteristic of a democratic society.

I. CONCEPTS OF LEARNING UNITS

The Emergence of the Unit Concept.—Cognizant of unsatisfactory learning resulting from prevailing classroom practices, various leaders of educational thought have formulated plans for the organizing and the teaching of learning units which are more comprehensive in scope than those utilized in the daily recitation. Prominent among the earlier unit plans were those outlined by Charles A. McMurry and Frank McMurry,¹ Harry L. Miller,² Henry C. Morrison, William

¹ Frank McMurry and Charles A. McMurry, *The Method of the Recitation*.

² Harry L. Miller, *Creative Learning and Teaching*

H. Kilpatrick, and Helen Parkhurst (originator of the Dalton Plan). These proponents of teaching procedures based upon the organization of learning into larger units were influenced by some of the educational philosophies which prevailed at that time. Two of these were (1) Herbart's "sequence of learning" plan, starting with the child's experiences and observations of everyday phenomena and leading to a general concept and its application, and (2) Dewey's analysis of a complete act of thought (or complete learning experience) into (a) a felt difficulty, (b) its location and definition, (c) suggestion of a possible solution, (d) development by reasoning of the bearings of the suggestion, and (e) further observation and experience leading to acceptance or rejection of the suggested solution.

The inherent unity of the human personality as revealed by modern science has also given impetus to the endeavors of educators to promote unity in the learning process. Some of the evolving concepts of human development are:³

1. *The child is a unit biologically*: Evidence is that from the moment of conception the organism is a whole, from which parts emerge by a process of differentiation or individuation. With the whole organism as a frame of reference, the various organs including the brain come into existence. The child is an integrated unit from the beginning. Education faces the task of conserving or preserving the original unity from the forces which tend to alter it, as it grows by differentiation.

2. *The child is a psychological unit*: Mental development is not a matter of putting bits of experience together to form knowledge. Experiences emerge from the mind by a process of differentiation. Experiences do not make the mind; the mind makes its experiences. The total thought pattern is a function of the whole rather than the parts. The learning bonds are the relationships between parts and their wholes.

3. *The child is a sociological unit*: The child and his social environment are the interacting parts of an organic unit. The welfare of each part is derived from the welfare of the whole. Social progress is dependent upon the maintenance of ethical relationships among all the parts. No one segment of humanity can be suppressed without jeopardizing the total pattern of social behavior.

Some of the early unit plans of teaching attracted considerable attention, and the Morrison plan won fairly wide acceptance. They failed to become the predominant classroom practice because of the prevailing stimulus-response concept of learning, with its emphasis upon the mastery of isolated bits of knowledge rather than upon total patterns of learning.

³ *Cooperation. Principles and Practices*, Eleventh Yearbook, Department of Supervisors and Directors of Instruction, National Education Association, pp. 52-60.

As consequence of acceptance of the Gestalt concept of the nature of learning, the unit idea grew in favor as a guide in the organization of curricular materials, even though methods of teaching were not greatly different from those used in textbook teaching.

The concepts of Gestalt psychology which served to bring about refinements in the unit method of teaching were (1) that the nature of the total learning situation is determined not merely by the sum of the elements which comprise it, but rather by the relationships which exist among the different parts; (2) that the parts of a learning situation have meaning only in terms of their relations to each other and to the whole; and (3) that the unifying factor in organizing the elements of a learning situation is the purpose of the learner.

Another factor which contributed to acceptance of the unit method of teaching was growing recognition of the need for more adequate provisions for individual differences. The failure of various administrative plans, such as ability grouping, to provide satisfactory means of individualizing instruction caused many leaders of educational thought to fix upon the classroom teacher as the proper person to meet the needs of individual pupils. As a result directed study, differentiated assignments, enriched curricula, and the unit method became the vogue. One of the main arguments advanced for use of the unit method of teaching was its value in providing for individual differences. The possibilities of the unit in this respect have too seldom been realized. The opportunity for different pupils to work on different aspects of a unit presents an excellent method of providing for the individual abilities, interests, and needs of pupils. More significant, however, is the demonstrated value of individual projects in making adequate provision for individual differences.

Different Concepts of the Unit.—A superficial analysis of the various unit plans of teaching may lead to the conclusion that they are essentially alike, except for terminology. The unit plans do possess a certain similarity in that all of them recognize larger units of learning than those of the daily recitation and are therefore characterized by the long-term assignment. The different plans, however, are identified with different educational philosophies and psychologies of learning. For example, the McMurrays and Morrison regarded the unifying factor of a unit as residing within the body of the subject matter, while Kilpatrick's project plan recognized the purpose of the learner as the integrating factor in the organization of learning materials.

Definitions of Unit.—A review of a few statements of the meaning of a unit as conceived by various writers may serve to reveal some of the fundamental characteristics of the unit concept.

The definition of the unit by Morrison ⁴ reveals the *subject-matter emphasis*. He states: "A learning unit is a comprehensive and significant aspect of the environment of an organized science, of an art, or of conduct which being learned results in an adaptation of personality."

The teachers ⁵ of the Lincoln School of Teachers College, Columbia University, formulated a definition of the unit which represents the *child interest* point of view as follows. "A unit of work is a series of worth-while experiences bound together around some central theme of child interest."

Grinstead ⁶ makes a useful *distinction between the learning unit and the teaching unit*, as follows: "When the individual desires to become master of some type of situation, rather than to meet a particular situation, and centers his energies upon the attainment of that mastery—the enterprise becomes a unit of learning. When the learner, in order to attain the goal of a unit of learning, accepts the direction of a teacher, to whom he looks for help in the selection of his activities, the clarification of his objectives, and the appropriation of success, the unit of learning becomes also a teaching unit."

The characteristics of a unit are well stated by Mursell, ⁷ who says: "Learning should be organized in terms of undertakings which seem real and compelling and valuable to the learner, which engage his active purpose, which confront him with a significant challenge, and which lead to deeper and wider insights, more discriminating attitudes, and more adequate skills."

Reference to the size of the unit is made in the following definition: ⁸ "A unit of instruction may be thought of as a set of activities through an entire semester (or even a year), or it may be thought of as a set of activities and experiences around a very small problem of living and life which will occupy a much shorter period of time. Neither size nor time is an important characteristic of a unit of instruction, however."

⁴ Henry C. Morrison, *The Practice of Teaching in the Secondary Schools*, 2nd ed., pp. 24-25.

⁵ Katherine L. Keeler and Mayme Sweet, *Units of Work*, p. 1.

⁶ Wren Jones Grinstead, "The Unit of Learning: Its Meaning and Principles," *Educational Outlook*, Vol. 7, 9-20.

⁷ James L. Mursell, *Successful Teaching*, p. 37.

⁸ F. C. Wooton, "The Theoretical Basis of the Unit of Instruction" (mimeographed), p. 2.

Jones, Grizzell, and Grinstead⁹ emphasize the learning product in their statement of a unit as follows: "The unit of learning consists of a group or chain of planned coordinated activities undertaken by the learner in order to obtain control over a type of life situation. The unifying principle is not the logical organization of the activities themselves, often thought of as subject matter, nor a center of child interest, but the learning product to be achieved. Thus learning production is not merely a skill, a habit, an attitude, etc., but such an integrated combination of these as will result in an adjustment of the individual to a life situation."

2. TYPES OF UNITS

There is no one unit procedure which can be considered *The Method* which should be followed. Today many creative teachers with the help of the children combine various techniques of several unit methods and thus provide for different conditions as they exist in the schools. Several different types of plans have been formulated and will be discussed in order to emphasize characteristics which have proved their practicality in a learning experience.

Subject Matter Units.—The word "subjects" in the curriculum represents knowledge that has been organized logically and systematically, such as geography, arithmetic, and natural science. In a subject-matter unit all information is centered around a division of a certain subject-matter field. The learning experiences are formal. Textbooks are the main source of information. The time devoted to the unit is relatively short. The teacher plans the unit and directs the work of the children accordingly. For example, in a unit on *Safety* all information is based on *Safety* and is obtained by reading a basic textbook on *Safety* in the hope that through transfer of learning children will apply the understanding and the habits of safety to real life situations. In a topical unit on *Birds*, children learn facts presented in their readers or science books and disregard the common birds of their own community which are not mentioned in the particular book used.

Experience Units.—Experience units are based upon life experiences in which the children are interested. First graders are interested in the care of their pets. Fathers of three fourth grade children worked in coal mines and as a result of their immediate interest, the

⁹ From *Principles of Unit Construction*, p. 19, by Arthur J. Jones, E. D. Grizzell, and Wren Jones Grinstead, 1939. Courtesy of McGraw-Hill Book Co., Inc.

class wished to learn about the mines. A group of sixth graders decided that they wanted to landscape the school grounds. In experience units children and teacher cooperate in planning the experiences. The plans are flexible so that changes may be made from day to day. Information is obtained by cutting across subject-matter lines. The amount of time devoted to the unit will vary with groups and the type of experience which is being pursued.

Since the core of the curriculum is based upon interests of children, the development of the tools of learning is incidental and depends upon the utilization of those skills in the learnings which come out of the units. However, the teacher is concerned about the realization of the objectives of education and guides the children in the selection of their units so that the activities in which they will engage will provide for the utilization of those skills and habits so essential in acquiring information and in the ability to communicate with others.

Projects as Units.—The term *project* was originally used in connection with the teaching of agriculture and home economics in the high schools. Teachers of these courses, realizing the need for extending the scope of their subjects beyond the textbook and the usually meager laboratory equipment and materials, assigned supplementary exercises for students to do on their farms and in their homes. The work on these projects was carried on in a natural physical environment. The student saw the project as the challenge of a real task, which gave unity to the activity. Aside from the limited supervision which could be given by the teacher the student made his own work plans, marshaled his energies, and evaluated his own efforts in achieving his goal, namely the construction of a material product. Because of (1) its self-motivating nature and its (2) increased student interest and (3) training value in more lifelike situations, the project method has more recently been employed widely in all subjects and at all grade levels as well.

In an endeavor to implement Dewey's philosophy for use in the classroom, Kilpatrick suggested that the essence of a project was the purpose which dominated the learner. He conceived the possibility of developing a purposeful attitude in connection with an intellectual task in a social environment and resulting in a material product. Thus he proposed a broadening of the original concept of the project to mean "a whole-hearted, purposeful activity proceeding in a social environment."

The use of projects does not represent the only effective method of motivating students. However, the project method does satisfy

numerous requirements of a good learning situation, particularly the freedom of students to suggest learning goals, to consider the relative merits of different goals, to choose one goal, to formulate their own plans to attain their chosen goal, and to pursue the plans to completion.

In an effort to make the project method a technique of teaching, rather than a philosophy which should permeate all teaching, one of the authors of this text in an earlier volume formulated the following statement of the meaning of *project*: "The project is a unit of activity carried on by the learner in a natural and lifelike manner and in a spirit of purpose to accomplish a definite, attractive, and seemingly attainable goal."

Characteristics of a Project.—An analysis of the literature on the project reveals that this kind of activity possesses the following characteristics:

1. The project is a learning unit. Its unity depends upon pupil purpose rather than upon the logical arrangement of subject matter.
2. The project is a self-imposed or willingly accepted task growing out of an awareness on the part of the pupil of its significance. Along with the acceptance of the challenge of the task goes the acceptance of responsibility for "following through" until its completion.
3. The project grows out of the pupil's experiential background, thus enabling him to discover clues for planning and organizing his own activities.
4. The project retains its identity only as long as the pupil has freedom to pursue his purpose unrestrained by the barriers of subject-matter boundaries or teacher domination.
5. The project invokes a whole-hearted effort on the part of the pupil to achieve an attainable and desirable goal.
6. The project leads to goals which are recognizable by the pupil, thereby enabling him to evaluate his own progress in achieving his objectives.

An Appraisal of the Project Method of Teaching.—There is little objective evidence which reveals the superiority of the project over other methods of teaching. The use of projects does not automatically insure that optimum learning will be achieved. It appears clear, however, that the philosophy and psychology underlying the project method are related more closely to the conditions essential for effective learning than are those of many other widely used methods of teaching. Properly used, the project method possesses the following values:

1. The relationship between the pupil and the teacher is conducive to effective learning, in that provision is made for guided self-activity on the part of the learner.
2. The attitude of the pupil is more favorable for learning as the result of the pupil's responsible participation in establishing and planning the goals of the learning activity.
3. The participation of pupils in learning activities which they have accepted as vital and significant to themselves tends to reduce the causes of pupil misbehavior.
4. In the group project the child becomes a helpful co-worker in a common and significant social task.
5. The use of the individual project is one of the most effective means of providing for individual differences. The group project also provides learning activities of many kinds suited to different capacities and interests.
6. The similarity of the technique of problem solving utilized in the project method to that involved in dealing with problem situations in life facilitates the application of school learning to life situations.
7. The possibilities of achieving desirable concomitant learning are enhanced by the project method. Among the attitudes which may be developed are open-mindedness and tolerance. More ample provision is also made for the acquisition of certain skills, such as study and work habits, techniques of cooperative effort, etc.

Examples of Good Learning Projects :

1. Writing a song to be sung by the class
2. Writing and staging a play by the class
3. Writing letters to local newspapers presenting viewpoints on current issues
4. Carrying on correspondence with students in other states or countries
5. Studying ways in which the local community attempts to protect the health of its citizens
6. Making a study of local housing conditions
7. Making a survey of the provisions for traffic safety in the local community
8. Making a mural portraying the history of transportation
9. Getting out a school newspaper
10. Planning a girl's wardrobe
11. Caring for a small brother or sister after school for a period of one month
12. Making posters for school events
13. Designing and making book ends, book covers, Christmas cards, billfolds, etc.

14. Presenting an operetta or oratorio
15. Keeping a confidential record of personal income and expenditures
16. Making a survey of business enterprises in the local community
17. Studying special days celebrated in the community
18. Studying the influence of spring on plant and animal life
19. Studying transportation by airplane
20. Studying and planning a spring garden
21. Building a school store
22. Learning how inventions have influenced recreation
23. Reading about homes of different kinds of animals
24. Studying the ways in which the pioneers in the local community provided the necessities of life

Activity Unit.—The activity unit, not greatly different from a project, is based upon the interests, needs, and capacities of the children. Activities are selected from areas of human living in which there are problems that all men must face. In the elementary grades the activities are limited to the interests, needs and abilities of each group of children. The following list illustrates types of units which represent basic needs and interests of maturing children :

GRADE ONE

Area : Life at Home and School

1. Living happily together at home and at school
2. Safety at home and at school
3. Helpers who prepare our food at home and at school

GRADE TWO

1. Community helpers in securing food, clothing
2. Having fun in our community
3. Safety community helpers

GRADE THREE

1. Means of bringing food into our community
2. Controlling traffic in our community
3. Controlling spread of colds and diseases

GRADE FOUR

1. Natural community resources that supply our needs, such as coal, oil, etc.
2. Elimination of hazards in our community
3. Cultural contributions of various national groups in our community

GRADE FIVE

1. Providing for the basic needs of people of other countries
2. Being friendly with our neighbors, Canada, Mexico
3. Strengthening interdependence with other countries

GRADE SIX

1. Maintaining health and safety among world neighbors
2. Considering our privileges and responsibilities in a democracy, as world citizens
3. Developing world unity based on scientific discoveries and inventions

In an activity unit subject-matter lines may be abandoned and children may draw on any source for information, such as books, experiences, community resources, creative arts. The teacher recognizes that the skills in the Three R's are not sufficiently developed incidentally and provides periods in which the skills and abilities are presented and developed through practice and drill and perfected through use in the unit. Teacher and pupils cooperate in planning procedures to be used in solving problems, in setting up standards of accomplishment, and in evaluating results.

Teacher Planning in Teacher-Pupil Planning.—Teacher-pupil planning does not imply that preplanning by the teacher is nonessential. Effective teacher-pupil planning is a result of reflective preparation on the part of the teacher. The teacher should anticipate and study the needs and the interests of the children in the light of opportunities for cooperative learning, thus making it possible for her to guide children to higher levels of accomplishment. She has thought through the activities that will aid in the development of objectives which are important for various levels of accomplishment in her group. She should evaluate available sources of information. Her plans should be flexible so that they can be adjusted to fit the plans which the children may set up for themselves.

With young children much of the planning depends upon the teacher's ability to guide their participation in planning. As children become more mature they should be able to assume more of the responsibilities of establishing the goals to be achieved for the good of all. At any level of the pupils' development, it is the responsibility of the teacher to be able to evaluate the goals set up by children and to

give guidance when needed. If children are capable of doing the job, then the teacher should refrain from giving too much help.

Comparison of Units.—Some of the differences and likenesses of the units presented may be clarified by presenting major characteristics of each as follows :

Types of Characteristics	Subject Matter	Activity
Selected by	Teacher	Teacher and Child
Purposes are	Based upon textbook or course of study	Teacher's and child's
Plans are developed	According to textbook	By teacher preplanning and children and teacher filling in details as unit grows
Source of content for unit is	Textbook	Life experiences and content areas, such as social studies, etc.
Source of information is	Textbook	Books, periodicals, community, experiences, etc.
Learning is directed toward	Mastery of facts	Needs and interests of children and well-adjusted child
Learning experiences are	Formal	Varied and many
Tools of learning are mastered	Through relatively meaningless drill	Through meaningful drill and through use in solving significant problems

Selection of Units by Teacher Committee.—The basic needs and interests of children at the various levels of development are known. We also know what the various patterns of behavior are that should be developed as the children mature. By using this information as a guide, many schools through teacher committees have set up a flexible program of sequential units for all elementary grades which provides for continuity and prevents repetition from grade to grade. Frequently teachers are furnished with a course of study or an outline of several units which are to be developed during the year and from this list the teacher and children cooperatively select the unit or units which they wish to pursue.

Teacher-Pupil Selected Units.—In other schools the teacher and children cooperatively choose the units out of their own areas of

experience. This type of activity to be effective requires expert guidance on the part of the teacher. Because of immaturity children may decide upon units which are too comprehensive, units which are limited in providing for the goals to be achieved, or they may wish to repeat a unit of the preceding year and thus omit an experience needed for the development of skills, attitudes, and understandings which are needed for that period of maturity.

Commercial Units.—Many units may be selected from magazines, collections in books, logs of units which have been recorded and published in books. Since these units have been developed by children and teachers in different communities, it is doubtful if they can be adapted successfully by a group of children whose needs and interests differ from the original group. Commercial units are good reference sources for informational background pertaining to the content, activities, visual aids, and bibliographies for teachers and children.

3. TEACHING A UNIT: PREPARATORY ACTIVITIES

Information Needed for Preplanning.—In order to develop a working plan for unit teaching, it is necessary for the teacher to have information pertaining to the children, to the content to be covered, to the materials on hand, and to available community resources. The following outlines are suggestive of the type of information needed and some of the ways in which the information may be obtained :

1. Discover interests of children
 - a. Observe them at their play, in the classroom, on the streets, in their homes
 - b. Listen to their conversations, discussions, suggestions
 - c. Check books read during free time
 - d. Check on hobbies, leisure time activities
 - e. Study their drawings and paintings
 - f. Note materials which they bring to school on their own initiative
2. Ascertain the needs and abilities of children
 - a. Observe them at their play, at their work, in the classroom, on the playground
 - b. Listen to their conversations, discussions, suggestions
 - c. Study their drawings and paintings
 - d. Study cumulative records
 - e. Hold conferences with parents
 - f. Diagnose basic skills

3. Determine the activities and interests of the community
 - a. Make a survey of the community
 - b. Converse with citizens
 - c. Attend civic functions, such as forums, concerts
 - d. Observe community activities
 - e. Take part in a community group or organization, such as church activities
 - f. Study major occupations
 - g. Study local newspapers
4. Locate natural resources, community resources, human resources as sources for profitable experiences for children
 - a. Make a survey of the community
 - b. Note industries
 - c. Note museums
 - d. Note libraries
 - e. Note parks, playgrounds, swimming pools
 - f. Keep a file of newspaper clippings pertaining to persons who have visited other countries, etc.
 - g. Make a survey of homes for materials, such as pictures, models, exhibits
5. Source materials available in school
 - a. Books, children's encyclopedias, magazines, bulletins
 - b. Audio-visual aids
 - c. Construction materials and art materials, such as clay, paints, paper, saws, nails, scissors, etc.
 - d. Microscopes, magnets, electric plate, work bench, easels, etc.
6. Teacher's informational background based on content needed in various units
 - a. Read authentic materials
 - b. Interview key persons in industries
 - c. Attend workshops
 - d. Join an educational tour
 - e. Attend illustrated lectures

Selecting Units.—The effectiveness of the unit method of teaching is determined in no small part by the selection of appropriate learning units. The suitability of a unit is dependent upon various factors which operate in a given learning situation. The most significant factors are the characteristics of children, particularly their abilities, educational statuses, interests, and social maturities. Other considerations in selecting a unit are (1) its contribution to important educational outcomes (these outcomes should be expressed in terms of basic understandings, attitudes, appreciations, and skills), (2) its appeal to the interests of the children, and (3) the possibilities of developing desirable concomitant learnings.

The individual teacher's responsibility for choosing units varies from one school system to another. She may be expected to make her selection from a list in the official course of study, or at least to adapt the units chosen from the course of study. In a few schools, teachers cooperate in the preparation of resource units. Ordinarily the individual teacher is not required to teach any unit unless she believes that it serves the needs of the children, and in some schools she assumes full responsibility for the selection of units which she will teach. In an increasing number of schools, however, the choice of the unit represents the combined judgment of the teacher and children.

In the process of selection, a careful analysis should be made to ascertain whether or not a unit possesses good teaching qualities. The teachers of a junior high school ¹⁰ recently formulated the following list of desirable characteristics :

1. The teaching unit should have a useful purpose
2. It should reproduce actual life situations as nearly as possible.
3. It should utilize materials as they occur in life.
4. It should involve a variety of direct sense experiences.
5. It should provide a considerable amount of pupil activity.
6. It should provide for some free, informal association of the pupils.
7. It should provide a good opportunity for the pupil to originate, plan, and direct activity.
8. It should make an opportunity for manipulative or physical activity
9. It should provide opportunities to judge, choose, and evaluate
10. It should contain accurate information.
11. It should be possible to complete within the time available for the unit.
12. The exposition should be clear enough for a new teacher to reproduce the experience.
13. It should state exactly where materials may be obtained.
14. When references are given, they should be complete and exact.

If the teacher is free to make selections of units for her class, she should prepare a list of tentative units, from which one unit should be selected by the children under teacher guidance. Each of the units should possess the characteristics of a good teaching unit and should be based upon the teacher's knowledge of the needs of the class.

Anticipating Outcomes.—The teacher should formulate a list of the outcomes which may be achieved by the study of each of the units. Taking for example a unit on "Conservation of Our Forests as a Source of Lumber," a few of the desired outcomes might include :

¹⁰ Simmons Junior High School, Aberdeen, South Dakota, *Suggestions on Unit Planning*, Aberdeen Public Schools, mimeographed.

1. Attitudes and appreciations: To develop
 - a. Appreciation for our natural resources
 - b. Appreciation for the benefits derived through conservation projects
 - c. Appreciation for the efforts of our leaders in science and in the government who were and who are interested in lumbering and in conservation of our forests
 - d. Appreciation for the needs of future generations
 - e. Appreciation of our independence
2. Understandings: To gain better understandings of
 - a. The necessity to conserve our forests
 - b. The effects of one industry upon daily living of many persons
 - c. Best measures to use in lumbering and in conservation of our forests
 - d. The life of lumber men
 - e. Our responsibilities in cooperating with government and with private organizations interested in conservation
 - f. Responsibilities of those who are in charge of the conservation of our forests
3. Abilities in using tools of learning: To develop increased ability to
 - a. Locate and organize information
 - b. Use reference materials
 - c. Read and interpret maps and graphs
 - d. Read critically and analytically
 - e. Creative work, such as writing, self-expression, and art
4. Habits and skills: Learn to
 - a. Plan before executing
 - b. Stick to the job until it is completed
 - c. Listen to learn
 - d. Practice neatness and accuracy
 - e. Learn cooperation
 - f. Practice courtesy in classroom and while on trips
 - g. Use reference material intelligently

4. TEACHING A UNIT: INITIATORY ACTIVITIES

Goals of Initiatory Activities.—The tone and quality of the work of a unit are established in the introductory phase. The first impression the child receives of the unit largely determines his attitude toward all his subsequent work on it.

In instituting a unit, the teacher should seek to achieve the following purposes: (1) to create pupil interest in the unit, (2) to reveal the significance of the unit to the pupils, (3) to reveal the main features of

the unit, and (4) to assist the children in formulating their objectives of the unit.

Creating an Interest in the Unit.—It is not unusual to find a small percentage of children in a group who will admit that they are not interested in the unit. These children frequently have a limited background of experiences and when they begin to realize what is in store for them their attitude may change. If children have been motivated previously for the unit by means of another unit or through experiences, it is advisable to move immediately into the exploration and problem-stating period. In organizing the approach period of a unit the teacher must take into consideration the purposes of the unit and the interests, capacities, and needs of the children.

The major techniques that are employed in introducing a unit are experiencing situations that are real to the children or experiencing situations in vicarious ways and then sharing those experiences in a discussion period. Following are a number of ways of conducting an approach period:

Planned Classroom Environment. It is very important that the teacher create the proper classroom climate for stimulating an interest in the unit. This may be accomplished by directing the children's attention to interesting incidents or situations of the unit by means of materials which are displayed in the classroom, such as a display of pictures, graphs, and charts on the bulletin board; an exhibit of products, models, specimens; and books on the reading table.

Motion Pictures, Slides, Excursion or Field Trip. Motion pictures and slides which are shown in the classroom are very effective in motivating children for study of a unit, as indeed is an excursion or field trip somewhere in the community. Occasionally a movie (that is if it comes at the psychological time) and the reviews of the movie in magazines may be used.

Radio. The radio is an effective technique to use in arousing the interest of children in the intermediate grades. News broadcasts, dramatizations of historical events, round table discussions of controversial issues, speeches by prominent leaders in economics, and science and musical programs may be used. The major problems in using the radio are that the desired program is not on the air during school hours; in the home there are many interruptions, or probably another member of the family prefers to listen to another program; and often the radio program does not come at the time of year when it is needed for the unit. In order to overcome these difficulties.

teachers may make wire recordings of the programs and then use them when they are needed.

Reading a Story or a Book. Frequently a story or book that is read during the story hour or during the literature period becomes the motivation for a unit. For example, a fourth grade class that had listened to a story about a child who lived in a jungle asked if they might have a unit based on "Life in the Jungle." Several books based on a specific unit may be placed on the reading table after the teacher has read selected passages to the children. If this reading is interspersed with remarks by the teacher and children, the children will read the books on their own initiative and during a free discussion period will comment on the story or stories which may serve as a lead into the exploration period.

Exploration Period. The main purposes of the exploration are .

- a. To discover what the children know and do not know about the unit
- b. To discover incorrect concepts
- c. To discover particular needs of children
- d. To extend the interest of the children in the unit

Exploratory Discussion Period. Exploratory discussion periods are intended to reveal what the children know and do not know about the unit. During these periods the teacher and children ask general questions which give direction to the discussions. While the children are discussing issues, offering explanations, and giving information, the teacher evaluates each contribution and records understandings and concepts which are not clear to the children, skills that must be developed, attitudes that must be strengthened, and those which must be developed. This information is used as a guide throughout the study of the unit. Pretests of the essay type are not recommended for elementary grade children. If a teacher desires to use a test, it is recommended that she prepare her own materials.

Stating the Problems.—After the interests of the children have been aroused and after the children have learned what the unit holds for them, the formulation of problems becomes the main issue. These problems should be in the form of clear statements of the purposes or goals to be achieved in order to give the children a definite aim toward which to direct their efforts.

The discussions of the exploration period should lead into the problem-stating period. Often these periods overlap to such a degree that each loses its identity. The problem-solving period is introduced

by the teacher asking the children what they should like to learn about the unit. As the children present their questions, the teacher writes them on the blackboard. Since the children do not have the background out of which all important problems should be developed, it is the teacher's responsibility to suggest and recommend those that the children omit. The teacher should mention these problems at the time when the children are making their suggestions. After the questions have been listed, the children and teacher evaluate them in order to discover relationships, to avoid duplications, to eliminate irrelevant material, and to organize the problems so that there will be a sequential pattern of attack. Often it is necessary to restate questions, particularly if two are closely related and may be integrated so as to eliminate one question.

Questions based on the unit "Conservation of Our Forests as a Source of Lumber" might include the following :

1. Where are the forest regions of the United States ?
2. What will we learn when we study this problem ?
3. What are the enemies of our forests ?
4. Mr. Brown worked in a saw mill. Could we ask him to tell us about a saw mill ?
5. Is there a movie about lumbering or our forests ?
6. Could we go to the lumber yard and see the different kinds of lumber ?
7. How do we make use of our forests ?

During this period it is the responsibility of the teacher to see that all problems which are to be studied meet the following standards :

- a. Should be paced to the needs, interests, abilities, and experiences of the children
- b. Should be stated in the child's terminology
- c. Should be limited so that problems can be completed in a reasonable length of time
- d. Should challenge the children and at the same time it should be possible for the children to achieve the goal
- e. Should be possible to use several activities in solving the problem
- f. Should make a contribution to the major theme of the unit

5. TEACHING A UNIT: DEVELOPMENTAL AND EVALUATIVE ACTIVITIES

Teacher Planning.—Although the formulation of the problem and the planning of pupil activities should involve pupil-teacher cooperation, it is necessary for the teacher to make a thorough preliminary

plan for the conduct of activities in order that she may be able to guide the pupils in their study of the problem. The plan should include a formulation of the chief problems, a brief summary of the facts and principles involved, and suggested pupil activities, together with sources of information. This plan should, of course, be subject to change as the unit progresses and new pupil interests become evident.

Teacher-Pupil Planning.—This planning period is a natural outgrowth of preceding periods. Frequently at this point the culminating activity is determined; it often is a factor in determining problems to be solved and activities to be used in solving the problems. As the children re-evaluate the orientation activities they make decisions in regard to (1) finding ways for solving the problems; (2) making provisions for solving the problems; (3) organizing committees for various activities; (4) noting those activities for which individuals may be responsible. Following are suggestions for solving two problems out of eight that were presented by sixth grade pupils who worked on the unit "Conservation of Our Forests as a Source of Lumber":

Problem: Who owns and manages the forests? What are the specific problems of each type of ownership?

1. Locate the information in various sources by evaluating the titles of books and by using tables of contents, indexes.
2. Write to Forest Service of United States Department of Agriculture for information pertaining to the problem.
3. Appoint committees to solve specific problems.
4. Committees are to report their finding to the class.
5. Make a map of our state showing the National Parks of the state.
6. Make a graph showing the comparison of public and private ownership of forest lands.

Problem: How may we conserve our forests?

1. Locate information in various sources.
2. Take notes on materials read.
3. Report information to class during a discussion period.
4. Ask a member of conservation agency in local community to speak to the class about the problem.
5. Make a frieze showing how our forests may be conserved.
6. Use motion picture "Forests and Men."

Directed Study.—In the directed study period the children and teacher put into effect plans on developmental activities which were made in the planning period. It is at this time that the problems are

solved one at a time and in the sequence that seems feasible to the group. The real purposes are :

- a. To put plans into effect.
- b. To evaluate the work as it progresses.
- c. To modify plans if it is necessary.
- d. To develop in a functional way abilities and skills needed to solve the problems.
- e. To provide opportunities in which children will learn to communicate their ideas to others.
- f. To give children an opportunity to share information.
- g. To develop attitudes and appreciations.
- h. To develop cooperation and a sense of responsibility to the entire group.
- i. To give children an opportunity to test results.
- j. To summarize frequently and to draw conclusions.

During this period activities will vary from day to day. There will be days when every child will be locating information, reading and writing for materials. There will be periods in which groups of children will be working on various activities, such as clay modeling, weaving, painting, while on another day the class may go on an excursion. At another time one child may read to a group of children for whom the reading material is too difficult but who can understand the ideas and generalizations discussed in the reading materials. During the study period specific plans may be made for excursions, for construction work, for an excursion, for an experiment, and for the culminating activity.

As the children progress in the solution of the problems, they will feel the need from time to time of adding new elements and of subtracting those elements which do not make a contribution at that particular time. During discussion periods they will present to the class work which they wish to have criticized, and will ask for help also. Activities of the study period should not be hurried. Children must think carefully and critically and evaluate the activities from time to time.

Evaluation Activities.—Evaluation is an important factor in every learning situation. It is important to know whether the objectives have been achieved, how the child is progressing, and how the environment and the teaching techniques are affecting the child. In a unit of work evaluation cannot be accomplished at a specific time. It is a continuous process and is going on during the planning period, problem-stating period, and study period.

In organizing an evaluation program, the objectives should be stated in behavior patterns and the instruments used in securing the information should be valid and reliable. Data for evaluative purposes may be obtained by means of tests, interviews, recorded accomplishments of children and of the group, and observations. Opportunities should be provided for each child to check his own progress, either individually or by presenting the results of his work to the group for criticism. This information is very valuable and should aid the teacher in :

1. Stimulating the children to do better work
2. Discovering weak places in their work
3. Pointing out better ways of doing the work
4. Making it possible for the teacher to know what has not been accomplished
5. Evaluating the worth-whileness of the activities
6. Making home reports
7. Preparing for individual conferences with parent and/or child

Culmination.—The culmination of a unit is very important since it becomes the guidepost for many of the activities which are used in solving problems. Frequently during the planning period children decide upon the type of culminating activities; if they do not have enough background to do it at that time, the decision may be made later. Details of the culmination are planned as the unit progresses. The purposes of a culminating activity are as follows :

- a. To provide a way of sharing experiences with others
- b. To provide group motivation for solving problems
- c. To appreciate the efforts of every individual who has made a contribution to a group project

The major characteristics of a culminating activity are :

- a. Making it possible for each child to participate
- b. Making it possible for each child to identify himself with the activity
- c. Making it possible for each child to achieve
- d. Providing an audience situation
- e. Providing for the presentation of many understandings acquired during the study of the unit
- f. Bringing the unit to a satisfactory close

In the elementary grades, culminating activities usually take the form of assembly programs, exhibits, or plays. A good culmination for a garden unit in a primary grade is a party. The room may be decorated for the party with the children's posters and pictures. At the party the children might serve a vegetable salad (lettuce and

radishes from the garden, and crackers). The favor for the mothers may be a garden story which had been developed as a group project or a creative piece of work of each child. A short program of garden songs or a movie showing the progressive steps of the gardening project as recorded in drawings by the children may be the closing feature.

The culminating activity for the unit on "Conservation of Our Forests as a Source of Lumber" consisted of the following activities:

1. A film on conservation of our forests showed to the parents; the children answered the questions raised by the parents.
2. An exhibit of products and by-products of lumber, posters and frieze on conservation by the children, and pictures representing various facts which had been presented during the study of the unit were on display in the classroom. Each child was responsible for his guest at the exhibit and answered any questions that he asked.

Bibliographies as Resource Materials.—The bibliography for the teacher serves the purpose of indicating the content which the teacher has at her command. The bibliography for the children indicates the content which the children will cover and also is an indication of the varied experiences that the children will have in locating information. Sources of information which appear in bibliographies are as follows:

BOOKS

1. Bruere, Martha G. *What Forests Give Us*. Washington: Forest Service, United States Department of Agriculture.
2. Deen, J. L. *Colorado's Forest Resources*. Fort Collins, Colo.: Colorado A. & M. College.
3. Hamlin, John. *Tales of an Old Lumber Camp*. Boston: D. C. Heath and Co.
4. Hanna, P. R., and Others. *Building the House We Live In*. Chicago: Scott, Foresman & Co.
5. Meader, S. W. *Lumberjack*. New York: Harcourt, Brace & Co.
6. Norlin, J. & Norlin, E. *Pop's House—The Story of Lumber*. New York: Henry Holt and Co.
7. Pack, C. L. & Gill, *Forest Facts for Schools*. New York: The Macmillan Co.
8. Rounde, Glen. *Lumbering*. New York: Holiday House.
9. Stevens, James. *The Way of Life in Lumber Camps*. Chicago: Row, Peterson & Co.

BULLETINS

(Forest Service, United States Department of Agriculture, Washington.)

<i>New Forest Frontiers</i>	<i>Need Marketing Advice?</i>
<i>How a Tree Grows</i>	<i>Know Your Timber</i>
<i>What We Get From Trees</i>	<i>Thin Your Crowded Trees</i>
<i>Cut Wolf Trees for Fuel</i>	<i>Cut Low Stumps</i>
<i>Proper Harvesting Pays</i>	<i>The American Land of Promise</i>

ENCYCLOPEDIAS

1. Compton's Pictured Encyclopedia Chicago: E. E. Compton and Co.
2. The Worldbook Encyclopedia Chicago: The Quarrie Corp.

PICTURES FOR BULLETIN BOARD

- The Lumber Industry. *Our World in Picture Series* Denver, Colorado; Centennial School Supply Co
- Lindsjo, Eleanor. *Lumber and Its Use* The Instructor Series of Illustrated Units, Dansville, New York; F. A. Owen Pub. Co
- Coca-Cola. *Lumber, Trees, Timber, Wood Products*. Obtained through Coca-Cola local distributor.
- American Forest Industries Inc, 1317-18 St, N. W., Washington
- | | |
|--------------------------------------|---------------------------|
| <i>Products of American Forests</i> | <i>Trees for Tomorrow</i> |
| <i>Where We Grow Our Trees</i> (map) | <i>Taming Our Forests</i> |

MOTION PICTURES

(University of Colorado, Extension Division, Bureau of Visual Instruction, Boulder, Colorado)

- The Forests and Health* (el, jh, sh) 1 reel, sound
- Forests and Men* (jh, sh) 1 reel, sound (conservation)
- The Forest and Water* (el, jh, sh) 1 reel
- Forest Fires or Game* (el, jh, sh) 1 reel, silent
- Forest Fires or Game* (el, jh, sh) 1 reel, sound
- The Forest Ranger* (el, sh, jh) 3 reels, sound

QUESTIONS, PROBLEMS, AND EXERCISES

1. Defend the statement, "Elementary school children are capable of carrying on effective research activities."
2. Does preplanning by the teacher preclude teacher-pupil planning? Defend your answer.
3. Prepare a ten-minute talk on advantages and disadvantages of teacher preplanning.
4. Show how democratic teaching procedures function in a unit of work.
5. Construct a list of democratic procedures that function during teacher-pupil planning.
6. List and evaluate the chief objections to unit teaching.
7. How can a teacher know whether the objectives of a unit have been attained?
8. How may the objectives of a given unit of learning be interrelated?
9. Present various means of appraising the outcomes of a unit of learning.
10. What does educational research reveal in regard to the values of unit teaching?

Chapter 13

DRILL AND REVIEW; TELLING AND EXPLAINING

1. THE FUNCTION OF REPETITION IN LEARNING

The value of drill in learning and teaching has been the subject of much controversy in recent years. Drill was once regarded as a most valuable approach to learning, and a considerable portion of the activities of the classroom was of the nature of drill, individual and group, oral and written, physical and mental. In the 1930's and 1940's less time and attention were given to drill and more reliance was placed upon incidental learning and learning through use and application. Recently teachers have been more and more convinced that desired results cannot be obtained without drilling on significant factual materials, and on specific elements of habits and drills.

There was early acceptance of the theory that learning is facilitated by repetition of what it is desired to learn. To commit passages, dates, names, or facts to memory called for repetition. To acquire a habit of action, speech, or thought, one must repeatedly act, speak, or think in a certain particular manner. To develop a physical or mental skill, one must repeat an act or mental procedure many times, each time attempting performance similar to the pattern of skill desired. Conversely the less frequently one repeated or used the thing learned (or partly learned) the more it tended to be forgotten or to decrease in quality and speed of performance.

The Laws of Use and Disuse.—These two principles of learning were referred to as the law of use or repetition and the law of disuse. For generations they constituted together the fundamental and most important basic principle of learning. As concepts of learning have been clarified, it has become obvious that practice, repetition, use, or drill is only one, though an essential one, of the important factors of learning. Other principles such as those of attention or interest, of recency, of understanding, and of readiness have come to be understood and utilized in teaching.

Mere repetition without regard to the degree of attention or motivation, to the degree of understanding of what is to be learned, or

to the degree to which the learner is ready by reason of maturity or adequate apperceptive background is not very efficient. Sentences of many words, if they are well understood and if they concern matters in which the learner is interested and with which he is well acquainted, may be memorized with a few repetitions. On the other hand, sentences of little meaning and interest to the learner usually require many repetitions. One memorizes nonsense words with great difficulty and only after many repetitions. Likewise, if the unmotivated learner goes listlessly through motions of physical learning aimed at the acquisition of a particular habit or skill, many more repetitions will be required and a high degree of perfection or certainty of response is unlikely.

2. KNOWING WHEN TO EMPLOY DRILL

Types of Situations Which Call For Drill.—It is important that the teacher know when to employ drill procedures. The general types of learning in which drill procedures may be useful are as follows:

1. Developing skills and abilities in reading
2. Learning specific facts, such as addition facts, multiplication facts, spelling words, etc.
3. Developing abilities to use various processes in arithmetic
4. Developing ability to solve problems
5. Developing skills, such as handwriting, locating words in dictionary, etc.
6. Developing physical skills, e.g., playing an instrument, batting a ball, handling paint brush
7. Developing a habit or unified set of habits, e.g., putting away toys, arriving at school on time, acknowledging a greeting or a favor (The development of an attitude is much like the development of a habit, being really a more or less habitual way of responding mentally or emotionally to a given idea or situation.)

The teacher must know what facts are sufficiently important for the children to remember, what skills are required and to what degree the children can master them, what habits should be acquired, to what degree of fixation, and when is the best time to develop them. These decisions can be made partly in advance and partly from day to day as learning proceeds based on the child's readiness. Likewise the teacher is responsible for discovering or assisting each individual child to discover what particular elements of a skill or set of facts need special attention in the form of drill

Drill, Diagnosis, and Individualization.—Drill should follow diagnosis and consequently to a considerable extent is an individual

matter. For example, to improve skill in handwriting it is not only necessary to have drill in general; but after some skill has been developed, further development will result only if attention is focused upon weaknesses, and drill upon the correct forms is employed as a means to substitute them for errors.

Because individuals vary in their need for drill or practice, particularly after the initial stage, drill should be used in connection with diagnostic procedures which will disclose the particular place or element requiring drill. Without diagnosis much time is wasted in drill which is not needed. With diagnosis, drill becomes somewhat an individual matter. Superior teachers, therefore, have developed drill materials or have adopted commercially published ones. They also use procedures which can be employed by the learner without the continued presence of the teacher. Drill materials, and often diagnostic tests or procedures, are provided in many textbooks, especially those in arithmetic.

Drill in Study Experiences.—More and more teachers are becoming teachers of children rather than of subject matter and in consequence are alert to the opportunities for contributing to the growth of children. The better teachers are quick to seize an opportunity to provide drill now and then for the development of desirable skills and habits of action and thought, habits of suspended judgment, speech habits, writing habits, habits of self-criticism of one's own ideas, habits of social manners, and skills in analysis. In every study experience, drill should be closely correlated with diagnostic testing and observation which will bring into relief the necessity of drill to bolster weak spots and to develop the skills, habits, or ability to recall to the desired level.

For drill in study experiences there are available workbooks, drill pads, and other materials of various sorts. In addition, many texts include drill materials in various forms, e.g., vocabulary lists, problems, and many different types of tests which serve the purpose of drill. Teachers should develop lists of materials for the purpose of variety of content.

Drill and the Unit of Work.—Success in teaching a unit of work in social studies or in natural science depends upon the child's ability to make use of needed skills in the tool subjects, such as reading, writing, spelling, and arithmetic. The use of the skills in the unit is not usually sufficient for the child to become efficient in the use of them. Therefore, children should at some time other than during the work on the unit drill on or practice those skills needed to carry on

their unit work. Children must, for example, understand how to use the encyclopedia in locating information on a lumbering unit, how to read maps and graphs; they must know when and how to skim in reading, and when and how to read critically. To take time for drill while children are working on the unit will kill their interest in the unit and will delay progress in solving problems for which they are motivated. After the children have learned the patterns of the various skills during drill periods, the skill may be perfected through functional use in solving the problems of the unit.

Self-Drill.—Self-drill needs to be well motivated, and progress must be noted by the teacher. The teacher should make children understand that the skill, habit, or ability to recall is really essential. Teachers frequently attempt to teach too much material, and children learn too superficially.

3. PRINCIPLES AND PROCEDURES

Commonly Recognized Principles.—There are some fairly well recognized procedures of drill which apply universally, regardless of whether the objective is acquisition of information, development of skills, or formations of habits. Among those commonly recognized are the following :

1. A desire to learn should be developed.
2. The drill should be a cheerful activity.
3. Drill should be discontinued if boredom appears, attention is lost, or interest wanes.
4. There should be freedom from distractions such as noises or other stimuli likely to divert attention in part.
5. Drill situations involving novelty are relatively more effective than those which have grown stale through repetition.
6. There should be a physical and mental attitude of attention and alertness.
7. Repetition should become focused more and more upon the weak spots.
8. Care should be taken to notice errors and omissions, which should be corrected at the first appearance.
9. Drill exercises for a given set of materials, skills, or habits should not be too infrequent. On important new material drill should be repeated daily at first, then at intervals of increasing length or in progressively briefer drill periods. If possible, drill on new material should be conducted two or three times a day in the initial stages.

10. Class drill must be supplemented or replaced by individual drill devised to meet the particular needs of the individual learner.
11. Artificial situations and "crutches" should be used sparingly, since they must eventually be discarded; but there are some situations in which, because of the learner's relative immaturity, they are almost indispensable.
12. The drill period should be followed by an unrelated activity.
13. The skill should be used in functional situations as soon as practical.
14. Provision must be made for review or maintenance drill unless use is made of the new acquisition.

Devices for Motivating Drill and Holding Adequate Attention.

—Perhaps the principal problem in drill is that of keeping attention at a high level and keeping the children interested both in making progress and in participating wholeheartedly in the drill. Among the devices which may be employed to advantage are:

1. Cause learners to see need for the skill
2. Keep graphic records of individual progress
3. Employ a brisk procedure to keep learners at their maximum performance
4. Use visual devices, such as flash cards
5. Devise schemes of competition, preferably individual
6. Use rhythmic music

Suggestions for Directing Drill.—The assignment is a very important part of an effective drill period. Children must know definitely on what they are to drill, how they should proceed during their study period, and what the reaction pattern is to be. They must have a means of knowing whether or not their reaction patterns are correct and, if they are not correct, how to go about making the correction.

Workbooks and textbooks contain instructions concerning how children are to proceed and can be understood by the children providing they have had previous experience. Children should not be expected to learn new procedures from workbooks or textbooks without any guidance from the teacher. New processes or operations should be developed in class; often it is essential that the teacher demonstrate with explanations how to proceed, and also guide children as they demonstrate for the class.

Following the orientation, all children work as individuals, the teacher observing them at their work—making corrections, giving suggestions, and encouraging those who need it. After the children understand what they are to do, the teacher should expect them to work independently for a time and inspect their work at a later time.

Skills which have been broken down for specific drill also must be put together and practiced in a normal situation. For example, if the children have been practicing on headings for a business letter apart from writing a letter, it will be necessary to write a business letter for a specific purpose. All skills should be practiced in situations in which they function in a normal way.

How effective the drill has been can be determined by the extent to which improved habits of work are observed in functional situations.

Suggestions for Drill for Development of Skills or Habits.—In addition to the general suggestions given earlier in this chapter, the following apply to the development of skills or habits:

1. The learner should have in mind a clear idea of the response expected of him.
2. In the case of complex responses or activities, the learner should be furnished with an explanation or demonstration of the pattern of behavior.
3. Knowledge of the goal and of progress toward it are favorable to interest and rapid learning, except where the progress is so slow as to discourage or confuse the learner.
4. Habits and skills should be acquired in situations as nearly as possible like those in which they will be used.
5. Adjust the pace of drill to circumstances, the maturity and development of the learner, and the complexity of the response. Drill should be brisk and quick, but not so fast as to encourage errors or to discourage the learner.
6. The teacher should determine what degree of thoroughness is desirable for the habit or skill, that time be not wasted in continuing drill after the determined level has been reached. On the other hand, it is desirable to continue drill in some skills to the point of overlearning as a means of insuring permanency.
7. Always subordinate speed to accuracy in the early stages. The fact that rapid performers are accurate performers does not mean that, for a given individual, the more rapidly he works the more accurate he will become.
8. Where there is a choice as to sequence, the initial procedure to be developed as a skill should be relatively interesting and not too difficult. Naturally, care should be exercised to see that prerequisite elements come first. Sometimes drill should first be upon two or more similar skills, which then are combined into a more complex one.
9. Drill performance should be carefully scrutinized for deviation from the desired pattern. Error should be eliminated as early as possible so that incorrect elements do not become fixed.

10. After preliminary drill revealing errors, remedial drill should be focused upon the incorrect or weaker elements. When accuracy in these is achieved, they may then be integrated with the other elements.

The most important points in developing skills and habits are: (1) that the learner shall have a clear picture of what he is to do and do it correctly the first time, and (2) that his performance be analyzed and diagnosed for errors or omissions. Demonstrations give a clearer picture than verbal directions of what movements or elements are involved in what the learner is learning. In the demonstration, attention should be called to important elements and those likely to be overlooked by the child.

Suggestions for Memory Drill.—The following suggestions apply to drill for remembering as opposed to drill for the development of skills or habits:

1. The meaning of the material to be memorized or remembered should be understood by the learner.
2. Any definite sequence in the items to be memorized, as in a poem, a description, or a narrative, should be set before the pupil as a framework. Outlines are very helpful in this connection.
3. An artificial sequence which will be helpful can often be worked out if there is no natural sequence of organization.
4. Search should be made for other types of associations which will assist memory, such as peculiarities, resemblances, contrasts, and alliterations.
5. Attempts to recall parts should be made soon after understanding has been reasonably well achieved and after a few repetitions.
6. Units for recall practice should be units with respect to meaning or with respect to rhythm and punctuation, preferably both where they coincide.
7. Avoid discouragement on the learner's part—especially on the part of self-conscious individuals.

The most important aids to memorizing are (1) a sound basis of understanding of the meaning of the materials, (2) the early use of recall, and (3) the establishment of associations (a) between various parts of the material and (b) with other ideas, words, and objects.

Oral Quiz as Drill.—A rather effective method of drill is the oral quiz. Many teachers of mathematics and of history start class periods with a brisk oral quiz, asking questions at random of members of the class and covering the most important of such items of the day's work as may be recited briefly. This learning exercise, which should

not occupy more than ten or twelve minutes, not only serves the purpose of providing class drill but also acts as an incentive to preparation. It is particularly appropriate for such items as important specific facts in science and history and mental mathematics, i.e., without pencil and paper.

It should be remembered that, in an oral quiz of this sort, a response, though not spoken, is given to each question by all or practically all members of the class, and that attention is focused upon the correct answers.

4. THE REVIEW PROCEDURE

Place of Review in Teaching.—The value of review exercises in the development of ideals, attitudes, and interests is difficult to evaluate. Perhaps ideals may be renewed, attitudes reinforced, and interests revived by review exercises; but more likely than not, better progress can be made, in so far as these outcomes of teaching are concerned, by going on into new materials.

On the other hand, when a body of information has been considered, even though it consists of but a few items, a review in the way of summary is both desirable and effective. Where acquisition of information is the goal, it is better to review than to be satisfied with half-mastery.

Even after drills have made the response automatic and accurate in acquiring skills and habits, it is necessary to repeat them occasionally to offset the possibility of forgetting.

Reviews should not be considered as synonymous with drill, however similar in some instances the two learning activities may be. The drill exercise is concerned with repetition for the sake of rendering the response automatic and accurate. A review serves to assist in these matters but it has distinctly different ends and aims. Review implies a recall or a renewing of learned skills, habits, and facts *in a new situation*.

Purposes of Review.—Review differs from drill in respect both to the purposes and to the procedures involved. The distinctive purposes of the review are:

1. To assist the child in perceiving significant relationships among various elements in a body of content or informational materials.
2. To give emphasis to the important concepts in a daily lesson or unit of work.
3. To promote greater permanence of learning.

4. To serve as the basis for diagnosis of a pupil's difficulties in the reorganization of learning materials, which is essential to the development of new meanings.
5. To provide a more satisfactory basis of apperception for new types of units.
6. To furnish an additional clue to evaluation of the pupil's achievement.

Occasions for Review.—In order to achieve the purposes stated in the preceding list, reviews should be conducted at various times. In schools in which the more traditional type of daily recitation is in vogue, the review of the preceding day's work may properly come at the beginning of the class period in the intermediate grades. This type of review serves to reinforce the knowledge acquired in the class the previous day. It also assists children in seeing the materials of instruction in their proper sequence. The daily review also may be in the form of a summary at the close of the class period.

In the conventional course, the review may likewise encompass the material covered in a week or month. Teachers devote part of the class period in some subjects one day each week (usually Monday or Friday) to a review of the work of the week concluded. The weekly review can be justified in that it contributes to more complete understanding and retention of the most significant material studied the previous week. The weekly reviews should usually be brief and well planned.

The review is also essential in the unit method of teaching. In the presentation phase of unit teaching, considerable attention should be given to information relating to the unit of work. Since new learning experiences are built upon previous experiences, the review serves as a necessary foundation for the study of the new unit. The review may be one of the culminating activities of a unit. In this connection the review may take the form of a summary of the main outcomes of the unit by the children or the teacher.

The Problem Review.—The materials to be included in a review may be grouped around a problem. A social studies class might work on the problem, "Why do so many persons spend their summers in Colorado?" This constitutes an excellent review problem. To answer it requires not only application of the pupil's knowledge of the influence of altitude and humidity upon temperature, but an understanding of differences in topography, scenic beauty, mountain recreation, and density of population.

A consideration of problems of these types involves the seeking of answers to problems such as the following:

1. Cause and effect, e.g., why are the summer nights so much cooler in Colorado than they are in St. Louis?
2. Comparison, e.g., compare the mountains to the seashore as a desirable place for a vacation.
3. Selective recall, e.g., name all evergreen trees in our state.
4. Summary questions, e.g., give the ways in which our forests may be preserved

Assignments Based on Review.—An assignment having review as the major objective must be based on a reorganization of materials previously studied and the application of skills in new learning situations. Great care must be exercised in planning a review of this type so that instructions are stated in such a way that the children can understand what is expected of them, that the procedure suggested varies from previous work, and that the ability of the groups has been considered. Assignments may be based on summaries, answering questions, making outlines on work covered, making graphs and maps, drawing pictures.

The Socialized Review.—Some of the techniques of socialized procedure can be adapted to the review. Various devices have been used to encourage children to participate. One of the most widely used plans is to ask a child to formulate a question based on the topic and designate another member of the class to answer it. The child who gives the answer formulates and asks another question. The questioning continues until each child has participated or until the content is covered. The questions of the different children may not be too closely related, so that the result is the recitation of a series of isolated facts. This disadvantage however, is usually offset by increased pupil interest in comparison with other methods. Perhaps it is advisable to utilize this method only occasionally to add variety to teaching procedures.

Characteristics of Good Review Procedures.—Because of the nature of their purpose reviews should be selective. It is neither practical nor desirable to attempt review of all the learning experiences. A great deal of detail is included in learning materials as background to the understanding of the more important points and is not in itself of much importance. Naturally the review will not be focused upon those details.

Second, the review should usually be such as to stimulate or to provide reorganization of learnings, to coordinate and to connect materials and learnings which were acquired on different days and at different periods. One of its purposes is to train children (particu-

larly in the intermediate grades) in organizing their learnings and in getting overviews and perspectives of large amounts of material.

The review should also furnish a basis for locating weaknesses of learners relative to the more important expected outcomes of the learning experiences and materials being reviewed as the basis of a final reteaching or relearning.

One of the greatest limitations of the review is the possibility that verbatim recitation will be accepted as learning. This is particularly true if material is reviewed in too great quantity or too minutely. Review should be concentrated upon a small number of large and important ideas and their subdivisions. Care should be taken, therefore, to be certain that materials recited by the children are adequately understood.

Times for Review.—Occasionally it is wise to review the discussion of a preceding class period for the purposes of (1) giving the children some idea of the degree to which they have mastered it, and hence of the further amount of study they should give to what has been covered; (2) pulling together and coordinating the ideas of the discussion; and (3) furnishing a summary. Quite frequently it is wise to begin a class period with a brief account of what has just been covered, as a means of setting the stage for an assignment to show how the new work grows out of and extends the old.

In order to counteract forgetting, provision should be made for frequent systematic review. The first review should follow soon after a knowledge or skill has been presented. As time progresses the time between reviews increases and the practice period of each review becomes shorter and shorter. The pattern of review should vary with different children, as some children forget more rapidly than others.

Effectiveness of Review.—The method used in the review determines whether the review has been good or bad. A good program will result in recall of the learned materials in new situations, in perfecting skills in varying learning situations, and in acquisition of deeper understandings. A program which reviews the learnings in the same way in which they were acquired does not provide for a deeper insight of things learned and skills acquired.

5. TELLING AND EXPLAINING

Need for Oral Presentation by the Teacher.—Frequently during the progress of a learning experience there is a definite need for the

teacher to give oral explanations or interpretations to a class. A number of examples of appropriate occasions are noted in the following paragraphs.

When a new topic or unit is introduced the teacher should

1. Reveal how the new learnings are related to previous learnings.
2. Devise a way of motivating the children for a unit of work.
3. Present possible approaches for working out the unit.
4. Motivate children to "tell."

As the work proceeds, the children may ask questions which are sufficiently significant to deserve discussion and clarification by the teacher. If a common difficulty is encountered by the group, it is well for the teacher to assist them by an explanation in overcoming it. Often a child's question provides an opportunity for the teacher to emphasize an important point, thereby developing new insights and understandings. If skillfully done, the teacher's elaboration and supplementation of materials create greater pupil interest and favorable attitudes for study.

Relation of Telling to Outcomes of Learning.—As a means of imparting information, telling is more effective than having children read the same information, since meaning may be better expressed in emphasis, expression, and inflection of the voice than in print, and attention is more easily maintained. Also, opportunity is available for questioning by the children and for the clearing up of misunderstandings by the teacher. Telling has another advantage in that it permits the use of more visual and concrete devices for explanation and emphasis.

In the development of skills and habits, telling has its principal functions in arousing interest, explaining the details of the skill or habit, and calling attention to incomplete or inaccurate responses. In explaining many processes, telling is very frequently more effective than the written instruction in the textbook or workbook, especially if the telling includes demonstration.

Advantages of Telling.—The most significant advantages of telling may be summarized as follows. Telling

1. Supplements the materials of the textbook.
2. Vitalizes ideas which too often appear cold and impersonal when printed in the pages of a book.
3. Provides better opportunity for clarification of and emphasis upon important meanings.
4. Can be adapted to the abilities, interests, previous knowledge, and needs of the children.

5. Can be organized in accordance with the principles of educational psychology rather than the logical organization of textbook materials.
6. Results in economy of time in that pupils are not required to search for relevant materials.
7. Permits the judicious selection and use of materials for the unit.
8. Can be synchronized with questions by children in regard to matters of interest or difficulty, thus giving children the opportunity to raise questions at the time when the answer appears significant to them rather than postponing questions which may arise in the course of reading.
9. Serves as a pattern of good oral expression which may tend to counteract the influences of careless, incorrect word usage.

The Limitations of Telling.—Many objections to telling have been mentioned by students of teaching methods. Among the more important objections the following should be mentioned :

It is difficult to obtain and keep the attention of children. It should be observed that it is also difficult—usually more difficult—for the learner to keep his attention at a high level while reading assignments. The degree of attention learners give to telling depends upon such factors as (1) the intrinsically interesting character of the materials, (2) the way materials are organized for presentation, (3) the skill and personality of the teacher as an explainer or teller, (4) the use of illustration, (5) the nature of the child's preparation and the nature of the expected follow-up.

The learner or listener is not active but passive. To some extent this is another way of saying that the listener has a low level of attention. In addition, however, it carries the implication that the learner is not getting experience in application, in initiative, in organizing learning material, in finding things for himself, or in problem solving.

Probably the greatest limitations of teachers as tellers or explainers are (1) lack of skill, which can be gained only by continued careful practice with a determination to improve, (2) and the lack of background of teachers in preparation, in life experiences, and in ability to correlate and organize materials from sources other than a few textbooks.

Judicious Use of Telling and Explaining.—The teacher must develop the capacity to decide wisely when to tell or to explain. The teacher must constantly think of the possibility that a little telling or explaining might help, and at the same time be mindful that the child must be deprived as little as possible of self-activity and self-

direction. The teacher must also be prepared to make explanations at any time when it may seem necessary, to refer children to sources where they can find the answers to their questions, and to encourage them by questioning to think through the answers to their questions.

In planning, the teacher should always be on the alert for places where an explanation should be made, where some inspiration should be given, or where a summary of learnings seems to be needed. In all these decisions, a great deal of common sense must be employed in applying the principle that the best teaching is that which provides the best learning environment for the child at all times.

Careful Preparation is Essential.—Careful planning for telling and explaining is very important, especially for the younger teacher. Careful planning involves in every instance some if not all the following elements :

1. Deciding how much time may be devoted to the explanation in terms of
 - a. The time available
 - b. The importance of that which is to be told or explained
 - c. The amount of time necessary to do a good job.
2. Familiarizing one's self with the materials or processes to be explained.
3. Thinking through what critical questions children are likely to ask and how they should be answered.
4. Deciding what are the more important purposes and objectives of the explanation in terms of understanding, skills, appreciations, interests, etc.
5. Planning the sequence of the explanation.
6. Considering the backgrounds of the children, what they can understand, what will interest them.
7. Thinking through explanation to discover where examples or illustrations seem to be called for and planning these (this includes the blackboard).
8. Thinking of occasions where the speaker may profitably be interrupted briefly for a question to a child or to the group.
9. Planning appropriate places to raise questions or to interest the children in problems which the material following will answer.
10. Planning an assignment of checks based on the explanation.
11. Testing in advance all films and apparatus to be used.
12. Making brief, easily read notes that will insure sequence and guarantee against forgetting.
13. Familiarizing one's self with notes in advance of the telling.

The Technique of the Teller.—The procedures used in giving explanations are not all alike, nor are the techniques of a given

explanation the same on all occasions. Suggested procedures are, therefore, not intended to be followed slavishly, but as techniques which usually are appropriate and effective and more often than not may safely be followed. Among those which are of most importance and which are most commonly employed by successful teachers in school are the following :

1. Make sure that any charts, diagrams, pictures, exhibits, models, books, etc., to be used are on hand.
2. Survey the room quickly for possible distractions, noises, and bad seating arrangements and make appropriate adjustments.
3. Review quickly, just before beginning the major objectives or the explanation.
4. Begin by rousing some curiosity or developing a problem-solving attitude by means of a question or problem.
5. Adapt the pace of your presentation to the
 - a. Ability of the class to follow you
 - b. Relative necessity for their reflecting upon what you have presented. (With respect to pacing, teachers usually make two mistakes :
 - (1). Talking *too rapidly*
 - (2). Employing the same pace throughout—too slow at times, too rapid at other times. Adjust pace to difficulties of the material presented and to the ability of the group.)
6. Keep the group in a problem-solving and expectant attitude ; raise questions and problems along the way ; stop now and then to ask a question of an individual or the entire group.
7. Employ interested, earnest, conversational tones and a natural, personal, conversational manner. Look into the faces of your children, if you are talking to them.
8. Check up on your audience occasionally with a question or exercise to see if it is following you with understanding.
9. Pause occasionally for questions and reactions, but do not permit too much digression. Do not stop to teach one child at the expense of the group.
10. Don't lecture : Talk to your audience as individuals in so far as that is possible.
11. Intersperse the telling with questions, developing the theme, encouraging the children to think along with you and to cooperate in the telling or explanation.
12. Do not forget to use illustrations (diagrams, maps, stories, demonstrations, etc.).
13. Cultivate a good time sense. Avoid digressions ; they often serve as distractions rather than illustrations. Above all, always keep in

mind these important points: (1) the objectives of the explanation; (2) the necessity that the children shall understand your explanation.

14. Do not be self-conscious while you are talking. Beginning teachers are far too much inclined to regard all lapses in obvious attention as personal affronts.

In the intermediate and upper grades the following additional suggestions are useful:

15. Exhibit a sense of humor in some way other than by using funny stories as illustrations. Phrase your remarks where possible in an interesting manner.
16. Train children to take useful notes intelligently in some subjects. Illustrate occasionally by making notes on your own talk on the board. Encourage the children to "write up" notes at the conclusion of the talk, and allow time for such an exercise. A good device is to permit children to work in pairs, or to consult each other while writing.
17. Hold your children definitely responsible for the content of talks.
18. Ascertain, as a means of diagnosis and as an aid in remedial teaching, what the pupils have learned from your talks. A short test immediately, either at the close of the talk or at the beginning of the next period, may be used for this purpose and may serve also as an inducement to careful attention.
19. Avoid becoming too attentive to your notes or failing to follow them.
20. Emphasize beginnings of divisions of your talk by giving cues to topic sentences and the like.

Illustrative Material.—Among the most valuable types of illustrative materials to be used in making explanations when presenting new ideas are the following:

1. Still pictures and slides in practically all learning experiences
2. Motion pictures, particularly to show action
3. Objects, specimens, models
4. Charts and diagrams to show relationship
5. Graphs of size
6. Demonstrations of processes, skills, etc.
7. Drawings and diagrams on the blackboard
8. Verbal illustration

Types of Verbal Illustration.—1. *The Anecdote or Story.* Some teachers are inclined to excessive use and misuse of verbal illustration. In the use of anecdote it is wise to emphasize very definitely what the anecdote illustrates. The "moral" must be put into clear focus. The

teacher who misuses anecdotes often has the discouraging experience of learning that her students remember the anecdotes well but forget the points they illustrated.

Anecdotes may be used to particular advantage in teaching history, the social studies, geography, and appreciation of music, art, and literature. Teachers may well keep a card file of good stories and anecdotes, with references to them in their textbooks or files of lesson plans. They should be constantly on the lookout for appropriate new anecdotes for use in their teaching.

2. *Examples.* It is necessary at this point to stress the importance of employing well-chosen illustrative examples to make clear the meaning of important new words, phrases, ideas, procedures, movements, and other things being learned.

In planning for the explanations to be made in class the teacher should take time to think of good illustrative examples. (*Examples* here are not problems or exercises for the learners, but individual instances that exemplify the idea, rule, word, or abstraction.) These examples should be of several varieties and should be selected from those likely to be familiar to the learners.

3. *Analogies.* Completely valid analogies are very rare. Almost always there are material differences between the statement to be illustrated and the analogous statement. Sometimes the analogy is misleading unless these differences are clearly pointed out. Because of its capacity for clarity and also because of its power to mislead subtly, the analogy is used frequently by advertisers, political speakers, and other propagandists to influence the thinking of untrained people to an extent and in a manner not possible with honest logic.

Using verbal illustration is to explain and narrate in terms of the child's previous experience. If he is to understand and to be interested, the telling must serve to call into his consciousness mental images of his previous experience, though perhaps in somewhat different organization and combination. In the application of this principle, common sense must be constantly and intelligently applied in telling, with particular attention to the following suggestions.

1. Decide what statements need amplification, illustration, and particularization
2. Decide which important words or phrases you are certain to use will be new or only slightly familiar to the children.
3. Select the explanation materials (words, examples, objects, movements, or experiences) from those already well understood by the children.

4. Ask the listener to give an example or attempt an explanation occasionally, if in doubt about his understanding.
5. Be sure that the explanation is not misleading.

Learners' Participation in Telling.—While there are many short tellings for which no advance preparation of the child is necessary, there are also many times when the explanation should be preceded by some sort of preparation of the children by the teacher. The most useful and most commonly used types or preparations are (1) developing a felt need for the explanation (2) directing the attention of the children to the more important things to be gained from it.

Children's Reactions During the Explanation.—The children must be encouraged to listen to the explanation in an attentive manner. It is feasible for the teacher to check on her listeners in order (1) to see if they are attentive, (2) to arouse and stimulate interest and attention, (3) to learn to what extent the explanation is being understood and what supplementation or amplification is needed. This may be done in a number of ways, including

1. Asking a child for a restatement of what has just been said.
2. Asking for criticism or expression of doubt.
3. Calling for an application of what has been said.
4. Providing an opportunity for anyone to ask a question.

The beginning teacher may be surprised, if not a little discouraged, to discover in checking up that children's actual impressions and understandings fall short of what the teacher had planned and hoped.

The Follow-Up.—The follow-up is important after a lengthy telling and should ordinarily be planned to carry out one or more of the following purposes: (1) to discover misunderstandings and needs for remedial or supplementary explanations, (2) to motivate attention and mental activity during the explanation, (3) to cause children to react to the explanation (4) to increase understanding and insight relative to the explanations.

There are several types of follow-up activities appropriate with explanations and telling, such as the open discussion, the oral quiz, the written quiz, the assignment of written exercises or of rewriting notes taken, and further reading on the topic. After most explanations and tellings, as well as after the use of visual materials requiring more than a few minutes, it is wise to make definite provision for some sort of follow-up which will serve at least the following purposes: (1) to see if there has been failure in understanding essential and important points, (2) to connect and relate parts or points, (3) to

discover the degree to which a sound basis has been established for further progress, and (4) to stimulate further interest and activity. What type of follow-up is best depends upon the nature of the material and other circumstances.

QUESTIONS, PROBLEMS, AND EXERCISES

1. From the commonly recognized principles of drill select the five most important and give reasons for your selection.
2. What are the principal differences in drill for learning facts and drill for learning skills or habits?
3. What is the relationship between review and diagnostic remedial procedures? Between review and drill?
4. Discuss the relationship between spacing of review and forgetting, between drill and forgetting.
5. Discuss drill and functional problems; review and functional problems.
6. How may a graph be used in a review?
7. What, if any, is the place of telling in the teaching of habits? Of ideals? Of skills?
8. Of the various methods suggested in this chapter for making an explanation effective, select six which you think are the most effective and be able to tell why you think they are the most effective.

Chapter 14

USING QUESTIONS AND PROBLEMS

1. TYPE OF QUESTIONS

The natural technique used by a young child in attempting to learn about his environment is that of asking questions. He knows that by asking a question he is making known to a listener the information which he desires to have, and that through an answer of the listener he will obtain what he desires to know. He constantly wants to know the *what*, the *why*, and the *how* about his environment. He wants to know why the kitty purrs, how the kitty makes the purring sound, why the rabbit wiggles its nose, where the stars go during the daytime, and so on. Very few children escape the questions, "Why did you do that?" "Did you hear me?" Practically every child has tried to make an agreement with a friend by saying, "If I give you a cookie, will you play with me?" A five-year-old at an airport who was asking, "Why does the plane need wheels?" "Can the plane go through the clouds?" was interested in finding out something about a plane; and the fifth grade child who said, "Teachers ask so many foolish questions," realized that he was not being challenged by worth-while questions. Teachers who use the technique of questioning when seeking wanted information are using a device fully understood by children.

Questions are used by the traditional teacher and are being used by the modern teacher, but for somewhat different purposes. The questions used most by the traditional teacher are designed to test the learning of facts. The modern teacher employs questions more often for guiding children in critical thinking, in interpreting facts, in developing ideals, and attitudes, and in developing generalizations.

Practical Principles.—Even though the question is an effective device to use in teaching, a high degree of skill in its use requires much planning and practice in preparing thought-provoking questions. It is essential that the teacher understand and employ intelligently the following principles. She should

1. Appreciate the fact that the question is a medium of guidance in instruction.
2. Have an understanding of child growth and development so that individual differences in capabilities, backgrounds, and interests are taken into consideration.
3. Understand how learning takes place; the thought question of today may be the memory question of tomorrow and a memory question for one child may be a thought question for another child.
4. Understand the aims and goals to be achieved.
5. Be able to think clearly and quickly as mental adjustments are being made to the child's pattern of thought.
6. Be able to detect quickly when children do not understand questions.
7. Be able quickly to diagnose reasons for not understanding questions.
8. Possess a vocabulary from which thought-provoking questions may be formulated.
9. Understand the principles basic to the techniques of questioning.
10. Have a background of meaningful information.
11. Understand the value of formulating before teaching key questions that will serve as the framework around which and out of which will grow understandings and the formulation of more questions.
12. Feel at ease when admitting that she does not know the answer and ask the children to assist in finding the answer.
13. Understand that unsolicited questions on the part of the children are an indication that the teacher has done a good job in arousing the interest and enthusiasm of the children in the learning situation.

It is within the power of every teacher to develop an understanding of these readiness factors and to develop the ability to ask thought-provoking questions. It is essential that she should have an understanding of the purposes of the various types of questions and of the mental activity initiated through the questions.

Teacher's Purposes in Asking Questions.—One of the more important purposes of questions and questioning by teachers is to get from the children information and opinions which will be useful to the teacher or to others in the class as stimuli to further thinking. It is unfortunate that many teachers use questions for this purpose less often than keener and more effective teachers.

Specific Purposes of Questions and Questioning in the Classroom

1. To stimulate thinking on the part of the children
2. To learn how much the child has remembered

3. To check upon the degree of the child's understanding of important facts and concepts
4. To discover any lack of the information needed for thinking about a problem
5. To see if pupil possesses background of experience for learning situation
6. To motivate the learning
7. To discover children's interests
8. To give the child an opportunity to express his ideas
9. To give direction in the organization of materials
10. To give the children opportunities to establish human relationships
11. To help child in concentrating on pertinent materials
12. To stress important facts
13. To help children to ignore irrelevant materials
14. To provide for drill in the mastery of facts having high social utility
15. To review or maintain information
16. To measure progress
17. To develop an understanding in the use of materials
18. To gain the attention of children
19. To develop background of mental set or to develop a problem-solving attitude toward subsequent discussion

Children's Questions.—Children should be given every opportunity to participate in discussions and in group work by asking sincere questions. If children should ask questions which are not within the general field of knowledge of the teacher, such as questions pertaining to astronomy, geology, etc., the teacher should be intellectually honest and admit the fact that she does not know the answers. As the children grow older, they should be trained to find the answers to their questions by consulting source books or by reflective thinking. Instances in which the teacher is unable to answer questions covering essentials or important details of the work at hand, or outstanding points in that field of knowledge, should rarely occur. If her previous knowledge has been somewhat incomplete or partially forgotten, she should make very careful daily preparation. Children's questions are guides in detecting the following :

1. Needs of the child
2. Interests of the child
3. Matters which are disturbing them
4. Points on which they wish to obtain information or understanding

Types of Questions.—There are two general classifications of questions, with several subdivisions, which may be used in directing

the learning of the child. The teacher who aspires to be successful in guiding children in solving problems should have in her repertory and should understand and be efficient in using the various types of questions.

Memory Questions. Memory questions are those which do not require reflective thinking and are based on rote memorization. The use of the question in oral quizzes in class has its purposes, but it does not adapt itself to reflective thinking. However, it is possible to emphasize important parts of the material, to direct attention to phases which might otherwise be overlooked, and to motivate the child to careful study.

Thought Questions. Reflective thinking is demanded by some questions, referred to as *thought* questions, which also result in other important types of mental activity. They are of great value in the development of problem-solving ability. Thought questions may be considered usually to be in one of the two following classes :

1. Those necessitating recall, and in addition some mental task or reaction with respect to the material recalled
2. Those in which a large part of the necessary facts is furnished the student and in answering which the task involved is very little recall, but largely reaction

Thought questions may also be classified as shown in the following paragraphs :

1. *Comparison.* Questions of comparison cover a great area. Children may be asked to compare pictures, objects, and word forms in order to note likenesses and differences. This involves the ability to comprehend similar and dissimilar characteristics. Definitions, ideas, and quantitative expressions are compared which may call for evaluations, inferences, and generalizations. In long division we say to the child "Did you compare your remainder with the divisor?" In this case the thinking process is one of judgment in noting whether the remainder is smaller or larger than the divisor.

2. *Judgment and evaluation.* The judgment and evaluation question is concerned with values or relationships. Whenever children are asked to criticize their work or the contributions of other children they are making judgments by comparing or evaluating results or ideas on the basis of some standard or observation. They also are organizing and probably reorganizing their ideas.

3. *Interpretation.* An interpretive question is a thought-provoking question which requires the child to draw a conclusion from known facts, the meaning of which must be explained. Many "Why" questions require an interpretation for the answer; for example, "Why does dew condense on plants?"

4. *Analysis.* An analytical question demands of the thinker the mental process of breaking a whole into its parts and considering each part in relation to the whole. For example, in solving a problem in arithmetic, we ask the child "What is given?" "What facts must we have?" "What are you trying to find?"

5. *Experiential.* The experiential question aims to have the child recall an experience in order to solve problems, to develop attitudes and appreciations, or to think in a certain direction. "What did you see when you were in the zoo?"

6. *Summary.* During discussion periods facts and ideas should be pulled together frequently so the children may evaluate major issues in terms of a problem under discussion. A summary also is an aid in directing the attention to those points which should be remembered.

7. *Diagnostic.* Any questions which aid in locating difficulties, in noting interests of children, in determining readiness for the introduction of skills and of various types of materials are diagnostic questions.

8. *Review.* Review questions, which are both memory and thought questions, are used in order to maintain learning and to recall crucial items. They also serve as diagnostic measures in discovering those children who do not understand or who have forgotten.

Form of a Question.—It should be possible for the child to understand what is asked of him. In the schools of today, children are in contact with many different teachers; since the vocabulary varies from teacher to teacher, it is the responsibility of each teacher to identify and to develop the meaning of those words which she uses in asking questions. For example, several of the many words which children may not understand are illustrate, explain, summarize, discuss, contrast, or compare.

Characteristics of a Good Question.—A basic consideration in respect to what constitutes a good question is the extent to which it is adapted to the aims and purposes of the learning activities. Teachers are inclined to ask trivial and insignificant questions because they are definite, while the big and vital problems seem to escape them. Following are some important characteristics of good questioning :

1. *The wording of the question should be clear.* In order to avoid the use of questions which may be involved and confusing, the teacher should formulate in advance a number of questions which are clear. Brevity and directness are qualities of a good question. If the questions asked are involved or confusing, the teacher should reword them and give the children such assistance as will help them to understand all the conditions of the question.

2. *The question should be adapted to the age and maturity of the children, and to their previous training in the subject before them.* The abilities of children vary greatly within a class. Teachers should be careful in their estimates of the capacities of children and should so word their questions that at least the majority of the class may be expected to grasp their full significance.

3. *The question should definitely describe the task of the respondent.* Questions which do not clearly define the problem should be avoided. "What about" questions should be used very rarely.

4. *Questions should conform to the immediate purpose of the teacher.* The wording of the question will vary, depending on whether it is to be used to stimulate discussion, to provoke opinion, to test for facts, or to help establish a frame of mind receptive to other points. "Yes or no" questions may upon occasion be useful as a means of approach, but are undesirable as a means of testing because of the probability of successful guessing.

5. *Questions should avoid the wording and organization of the textbook.* Those which are in the words of the teacher or of the child will stimulate independence of thought and study and not place a premium on memorization of facts and the possible repetition of phrases that are not understood.

6. *Questions involving thought and organization are usually preferable.* For rapid memory drill questions requiring recall only may be employed, but ordinarily it is preferable to use those which in addition to recall require evaluation, organization, or thought comparison.

2. LEARNING SITUATIONS IN WHICH QUESTIONS ARE IMPORTANT

Discussion Periods.—Discussions should be encouraged in every learning situation, such as social studies, reading, arithmetic, story telling, art classes, etc. A cooperative work-type discussion period

should be informal and children and teacher should be free to ask of each other questions pertaining to the learnings to be acquired. During this period every child should be thinking about the questions that are asked and should be listening critically to answers that are given by children and teacher. Children also should understand that the needs and difficulties which they meet in reading, in locating information, and so on, should be made known through their own questions as well as through the answers to written questions asked by the teacher.

The problems which a teacher presents to children before they study should be thought provoking. Questions to which the answers are obvious and which can be answered by "Yes" or "No" without any critical thinking will not develop effective readers. By presenting questions which will require the children to think while they read, to evaluate what they read, and to make use of what they read, the teacher will produce effective reading habits and skills and a favorable attitude toward reading. To construct thought questions requires an understanding of materials upon which the questions are based. What kinds of questions should the teacher ask? The following questions based on the story, *The Silver Penny*, in the fifth-grade Basic Reader, *Days and Deeds*,¹ will clarify the issue.

In this story two boys plan to give a show for the benefit of the Red Cross. Howard handles the advertising and acts as master of ceremonies. Ted is the performer at the show, with several good magic tricks up his sleeve. Jason is the "villain" of the piece and tries to break up the show because he thinks, quite wrongly, that Howard and Ted made off with his bicycle last Hallowe'en. Quick thinking by Howard and Ted saves the day.

What questions might a teacher ask about this story? Not uncommon would be questions like the following:

- When was the show to be given?
- What was the price of admission?
- Who was the magician?
- How many persons came to the show?
- What was the first trick?

These questions test recall of certain isolated facts in the story. They could be evolved quickly and answered briefly. But it is clear that answering them will require little thought on the part of the pupils and little practice in grasping essential meanings. Now suppose the teacher asked such questions as:

- What is the first hint in the story that Jason is not friendly toward Howard and Ted?

¹ *The Supervisor's Notebook*, "Helping Teachers Ask Genuine Thought Questions," Vol. 10, No. 2, p. 360.

Why was Jason unfriendly?

What happened to show Jason he had been mistaken in blaming Howard and Ted?

How did the boys save their show?

How do we know Jason was sorry about taking the mercury?

These questions cannot be answered by recourse to the exact words of the book. Pupils must think and relate the meanings of many sentences to answer them. Also, these questions do not ask for isolated details in the story, but instead keep the children's attention directed to essential meanings of the selection, significant relationships in the plot, and important points in the portrayal of characters. If isolated facts have been seriously misinterpreted, that will come out as children answer the broader questions.

QUESTIONS WHICH LEAD CHILDREN TO REACT TO AND APPLY WHAT THEY READ. In leading a child to react to and apply what he reads, the teacher must take him beyond a consideration of "What does the author say?" to consideration of "What does this material mean to me?"

It is at this point that reading has its greatest value for pupils—when they stop reading apathetically and start making what they have read their own, or reject it because it does not meet their standards or their needs. It is only in so far as a child reacts to, evaluates, and applies what he reads that reading has any effect on his development as a person.

We must emphasize with teachers the importance of not stopping with comprehension questions only, but of going on to such questions as:

What do you think of Jason's attitude toward the show?

What do you think of his idea of getting even?

In what way did Howard help Ted? What does this tell you about the kind of boy Howard was?

What do you think Jason learned from his experiences in this story?

How might this help him in getting along with others in the future?

Were you ever in a "tight spot" like the one Howard and Ted were in?

How did you get out of your difficulty?

Did this story give you any ideas you could use with your friends?

Could we use any of the ideas in this story for advertising the next show we give or in planning our next assembly program?

As is evident, questions such as these get the children to think in new ways about what they have read, to make inferences, to reflect on the actions of characters, and above all to relate what they are reading to their own lives. Teachers must be cautioned to remember that children's answers will not be identical on questions like these; there is not necessarily just one right answer. A child's responses must be evaluated in terms of his past experiences and his present standards of judgment. Much growth will be stimulated by give-and-take discussions among pupils, as all learn to respect the opinions of others and become willing to stand up for, or modify, their own.

Questioning About Pictures.—In early primary grades pictures serve a definite purpose in the reading program. By studying the pictures experiences are broadened, meanings are clarified, oral expression is stimulated. At first the child enumerates that which is familiar to him in the picture. By means of questions, the teacher guides him in understanding the main idea; for example, "What are the children doing?" The next question naturally would lead to observing some of the details. If children do not draw upon their own experiences in interpreting the picture, it is the teacher's responsibility to ask questions which will direct the child's thinking to recall similar experiences and tell about them. Other questions which could be asked are imaginative questions.

Film strips, movies, illustrations in books frequently must be clarified through the use of questions and answers

Questions and Textbooks.—In most textbooks questions are placed at the close of the reading assignment or at the end of a unit of work. These questions serve as an aid in determining the child's understanding of material studied and also may be used as a guide in the discussion which may follow an unsupervised study period. In either case, at the time when the teacher makes the assignment, motivating questions should indicate to the children the type of reading skills which they will use in reading the materials. If the questions call for details, then the children must read slowly and carefully in order to isolate and to remember specific details. If they are reading to get the general significance of the problem, then the act of reading will be in line with the type of reading done while reading a story. If children should use interest-type reading skills and then try to answer questions dealing with details, they will find that they will not have the information with which to answer the questions. It also may be necessary for the teacher to clarify terms which are used in the questions

Materials Prepared by Teacher.—Many teachers must prepare their own supplementary materials, such as study guides, checks, and tests. Great care should be exercised in constructing the questions as they should involve more than the reproduction of obvious items; questions of this type do not demand the best thinking of the child and the child who reads carelessly does as well as the child who reads conscientiously. Typical questions appearing in teacher-made materials are the "Yes" and "No" or true and false statements and multiple choice. In constructing materials the teacher should definitely under-

stand the abilities that are functioning in the various types of responses she is exacting from the children.

3. QUESTIONING TECHNIQUES

In the modern school, the method of questioning has become much more complex than formerly, with emphasis being placed upon the ability of the child to generalize, to interpret facts, and to do more than merely repeat facts learned from a text. It is apparent that there are many possibilities for the use of the question, but the method is too often poorly employed.

Reasons for this failure of teachers to be more adept at questioning are obvious. The teacher-training period is of necessity short, and there is little opportunity for the student either to develop the technique or to observe those who are proficient. Beginners have a tendency to imitate the methods of their high school or college professors. Since the beginning teacher is also highly dependent upon the textbook for information and guidance, it is natural to use textbook material previously assigned for classroom questioning. The question may be extensively utilized as a stimulus to learning, and it is essential that the teacher become skilful in its use.

The manner in which questions are asked should be determined by the type of lesson, by the personnel of those participating in the activity, and by the size of the group.

Specific Techniques of Questioning.—Specific techniques which should help a teacher to develop effectiveness in questioning are as follows:

1. Questions should be fairly well distributed among the different members of the group. Assigning a disproportionate number of questions to the slow will tend to hamper the progress of instruction, while a disproportionate assignment to the brighter children will encourage delinquency of the slow.
2. No special order should be observed in the distribution of questions. This practice encourages children to become inattentive.
3. The child who is to respond to the question should be designated after the question has been asked and time has been allowed for formulating the answer. This technique will encourage more children to think through the answer.
4. The rate for questioning should be adjusted to the nature and purpose of the questioning and the relative familiarity of the group with the material covered in the question. Drill questions may be asked rapidly, but with thought-provoking questions sufficient time should be allowed for a carefully considered answer.

5. Individual differences of ability and individual differences in special knowledges and interests should be taken into consideration in the assignment of questions. By giving the more difficult questions to the abler and the less difficult to the less able, the better students are stimulated to exert themselves, and the poorer students have an opportunity for success instead of failure.
6. Questions should occasionally be assigned to inattentive children.
7. Questions should ordinarily be asked in a manner such as not to suggest the correct answer.
8. Repetition of a question in most instances is not advisable. But if the children have been attentive and do not understand, the question should be restated and probably reworded in order to clarify the meaning.
9. A natural, interested, and conversational tone should be used rather than one which asks or demands in a formal, artificial, schoolroom manner.
10. Questions should be asked in a manner which indicates confidence in the child.
11. Pivot questions, which have been thought out in advance, should be employed in the development of the lesson
12. Freedom on the part of the teacher from textbook or lesson plan will enable her to ask questions in a natural, conversational manner and to give the class the benefit of her personality and expression.

Outcomes of Questioning.—The questioning procedure can be used to advantage in the development of the various outcomes of teaching. While questioning may contribute more directly to the development of information and appreciations, it can also facilitate the development of habits and skills of all sorts. Through skilful use of the question it is possible to give training in critical evaluation, in problem solving, and in generalizing. Since ordinarily the primary function of the question is to stimulate thought, it should be widely utilized as a technique of problem solving. Questioning can indicate the necessary steps for meeting and attacking problems, that is, to see clearly and definitely the problem and its exact nature, to plan the attack, to guide the procedure, and to discourage premature conclusions.

Suggestion is a more effective method in the development of such outcomes as desirable attitudes, ideals, and interests than are more direct means. The question lends itself very well to this art when it is skillfully applied. At present it is realized that these outcomes are very much to be desired and that every possible means should be used to attain them. Ideals cannot be taught as may the addition and

subtraction facts in arithmetic. They come as a result of experience which has suggested the emotionalization of standards. Skilful use of the questioning procedure is effective in stimulating thought and feeling on these matters. In order to develop tastes, it is necessary to give the children experiences which they can analyze for points of merit, beauty, and enjoyment. These they must "discover" for themselves and not have them thrust upon them.

A much desired outcome of education is the development of persons who can think deliberately and systematically. Good questioning procedure can help to develop the habits of thinking twice before speaking, of restraining oneself when in doubt, of considering alternate possibilities, and many others. It should also aid in keeping children from succumbing to emotions and prejudices. Skilful questioning on the part of the teacher is undoubtedly of assistance in attaining these desired ends.

Questions from Pupils.—Teachers should try to keep alive in all grades that questioning tendency of pupils which is so prominent in their earlier years. Following are suggestions which should be of service in stimulating and handling questions by members of the class:

1. All sincere questions by any member of the class should be treated with appropriate consideration.
2. Determine the importance of considering the pupil's question and the time to be given to it by the value of the question and the percentage of the class that will profit by discussion of it.
3. Not every question should be answered. Stimulate the questioner to some effort on his own behalf and refer questions to others in the class in a manner which will not reflect on the questioner.
4. Students should be dealt with on a basis of logic and reason in situations where they question authority, and patience must be exercised.
5. The formulation of questions as an exercise should be used sparingly and is not necessary when spontaneous questioning already exists.
6. In those situations where opinions differ, the student should not be deprived of the privilege of stating his own opinion. Even if he is apparently wrong, care should be taken not to antagonize or discourage him unduly by "strong-arm" methods.
7. Care should be taken to be courteous and tactful in refusing to answer questions which are irrelevant.
8. The suggestion that the questioner consult references for his answer should be made occasionally. However, consideration should be given to the possibility that the questioner will forget to do so.

4. DEALING WITH ANSWERS

During a group discussion or group instruction period each child should feel that it is his responsibility to consider every question that is asked and that it also is his responsibility to evaluate answers that are given in order to accept or reject the reply and to modify his own answer on the basis of answers presented by other members in the group. Even though only part of the answer may be correct, children should be encouraged to answer. If the child misses the point of the question, it is the responsibility of the teacher to help him understand why his answer is not acceptable. This procedure will encourage children to think and to take an active part in the learning activity.

Weaknesses in Children's Answers.—Children must be guided in developing the habits of deliberate thinking, suspended judgment, and self-criticism before submitting an answer. Many children formulate answers immediately without analyzing the question critically. Others are satisfied when they have made a contribution by presenting only a minor point. Answers often are based on the opinions of children rather than on authentic information. Frequently a child will try to conceal the fact that he does not know by talking around the point. By analyzing the answers of the children the teacher may detect a source of weakness in her questions or her standards in accepting answers. Such an analysis leads to improvement in setting up a remedial approach to better class management.

Handling of Answers.—The following suggestions for the handling of answers have grown out of much observation of successful teaching.

Repetition of answers by teachers should be avoided except in rare cases in which for emphasis it is desirable to repeat the answer. If children know that the teacher will repeat the answer, they will not pay attention to the child who is speaking, and the child who is answering will not be concerned about the children who should be listening, and therefore, will not feel the necessity of formulating his answers so that he will be understood by all the children. The repetition of answers also is very uneconomical since it consumes so much time. Repeated answers and the overuse of the mechanical "All right" become boring. At best, they seem to call attention to the catechising nature of the questioning. Incorrect answers should frequently be modified by the teacher.

The amount and nature of commendation or disapproval by the

teacher should be determined by the probable nature of the response and the effect upon the class as a whole and upon the individual. Encouragement and approval are necessary to some individuals but spoil others. Frank criticism stimulates some, while such a procedure discourages or antagonizes others. When in doubt the best policy in the upper grades is to say nothing. In the lower grades frequent mild encouragement is wise.

Circumstances must determine the employment of "advance" assent or disapproval. Advance encouragement can be used if the child is timid, or if the material is new and difficult. When the question is being used for testing purposes, care must be taken not to give the child clues to the correct answer.

Answers should be in good English and in complete thought units. Since good English is largely a matter of training and habit, the cooperation of all teachers in this matter is desirable.

Teaching procedures characterized by hand-waving should be discouraged. Courtesy, fair play, and reasonable dignity must be preserved, even in the most enthusiastic class.

QUESTIONS, PROBLEMS, AND EXERCISES

1. What criteria would you apply in testing the questions which you ask your class?
2. What are the advantages and disadvantages of using oral questions as a means of testing children?
3. Write one question of each of the eight principal types which demand thinking upon some topic which you plan to teach.
4. Discuss the following statements: "The greater the number of questions, the more thinking the child will do." "An evidence of quick, clear thinking is the prompt reply."
5. Prepare a five-minute talk on "Values of being sympathetic with children's questions and answers."
6. Select a picture and prepare five different types of thought-provoking questions based on it for instructional purposes at the primary level and at the intermediate grade level.

Chapter 15

SELECTING AND ORGANIZING LEARNING MATERIALS

1. THE TEACHER'S ROLE IN CURRICULUM CONSTRUCTION

The character of the curriculum is largely determined by the teacher. The manner in which teacher control is exercised varies considerably from school to school. In some situations, the whole curriculum is a teacher product, constructed cooperatively. In her capacity as an official member of the curriculum committee, the teacher assists in determining the scope of the curriculum for the entire school, or she may participate in the preparation of source units and other suggestive instructional materials within a given area of the curriculum. In other schools, the curriculum is largely predetermined by state legislative enactments, state department of education requirements, or local school administrative and supervisory regulations. Governmental agencies usually indicate the broad outlines of the curriculum in terms of subjects, grade placement, and time allotment. They also attempt to implement these requirements by means of written courses of study.

A course of study is the teacher's guide in using the curriculum. It contains suggested objectives, content, teaching procedures, and methods of evaluating pupil achievement within a particular area of the curriculum. It may be either mimeographed or in printed form. Whether the course of study is teacher-inspired or dictated by outside agencies, the classroom teacher is its final arbiter. In the last analysis it is dependent upon the emphasis placed on various items of content and manner of presentation by the teacher. Even when the course of study was regarded as the "directions and specifications" having the force of law in respect to required subjects, grade placement, sequence of topics, and time allotment, the qualitative aspects of the curriculum were in the hands of the teacher.

The modern concept of the suggestive function of the course of study, however, places a much greater premium upon the teacher's initiative and resourcefulness. Regardless of its origin or degree of completeness, the official course of study can merely indicate general

guiding principles. Source units can do little more. They are designed to serve as blueprints, subject to modification by individual teachers. Their use with different classes requires many alterations and much supplementation. Many important decisions in regard to details must be made by the teacher. Valuable as the official guides may be, adaptations and refinements must be made in terms of the students involved. These changes are so far-reaching in scope and significance that the resulting product is sometimes referred to, not as a course of study, but rather as a *course of instruction*.

Teachers Should Make Courses of Study.—In this chapter we are not concerned with the teacher as a member of an official curriculum committee, but rather as the designer of courses of study for her own teaching. Among the reasons for adapting the official course of study to meet the requirements of particular classes are :

1. The curriculum assumes its truly dynamic character through the constant adaptation of the course of study by the individual teacher. Official curriculum committees may produce courses of study at given intervals. The day-by-day adjustment made by the teacher is the factor that makes the curriculum program continuous.
2. Most courses of study are prepared in terms of the student of average ability. Hence, modifications are necessary to provide for the needs of the slow-learning and superior students.
3. It is necessary to enrich the course of study by the inclusion of curricular materials designed to serve the special interests and needs of each student.
4. More appropriate and timely approaches to the teaching of a topic than those suggested by the course of study may frequently be made.
5. Modification of the suggested time allotment may be desirable because of the differences in the experiential background of various classes.
6. Suggested learning activities may need to be modified because of available facilities, such as building space and equipment.
7. The suggested organization of instructional materials may be adjusted in terms of available library materials. For example, the effective use of the unit plan is dependent upon the availability of a wide variety of books and other supplementary reading materials.

In the absence of an official course of study or source units, the foregoing list of considerations is equally applicable to course of study construction by the individual teacher.

2. CONCEPTS ESSENTIAL TO COURSE OF STUDY CONSTRUCTION

Whether a teacher prepares a course of study in advance or develops it as the teaching proceeds, she should have three concepts clearly in mind, namely *the nature and development of the curriculum, the relation of the course of study to the curriculum, and the relation of the general (official) course of study to that prepared by the teacher for use in a particular course.*

The Nature and Development of the Curriculum.—The curriculum is as broad and varied as the child's school environment. Broadly conceived, the curriculum embraces not only subject matter but also various aspects of the physical and social environment. The school brings the child with his impelling flow of experiences into an environment consisting of school facilities, subject matter, other children, and teachers. *The interaction of the child with these elements constitutes learning.* Not only is the learner an ever-changing personality resulting from a continuous series of new experiences, but the constituent elements of his environment are constantly evolving and unfolding. The interactions between the two factors which comprise the learning situation, therefore, are manifold and varied. The inherent character of the learner and the environment give learning its dynamic quality.

The one element in the situation that has been considered static is the subject matter. It also has been the one foreign element in the learning situation. Until recently subject matter was suggested, if not actually imposed, by individuals or agencies outside the school. These individuals were in most cases subject matter specialists. They assumed that the chief function of the school was to transmit from one generation to another the culture of the race *in the form of subject matter.* They also believe that the organizing principle for school activities lies within the body of subject matter itself. Many of them accepted the theory of formal discipline, and justified the retention of much obsolete material on the ground that these materials were difficult for children to learn and therefore were of value to them in *training their minds.* The chief difficulty, however, arose from the fact that these specialists were unfamiliar with the interests and needs of elementary school students.

Elementary School Teachers as Curriculum Makers.—In comparison with those of a generation ago, teachers today are much better qualified to construct courses of study to meet the individual and social needs of their pupils. The opportunities of classroom teachers to obtain firsthand pertinent knowledge of the abilities, interests, and

needs of children place them in a strategic position to build a curriculum. The one problem in regard to curriculum-making by teachers which has not been solved satisfactorily is the matter of providing sufficient time in the daily schedules for teacher participation.

The objectives of a general curriculum revision program in which the teacher participates are *to provide better experiences for children and to promote growth of teachers in service*. The teacher does not have to await the arrival of an elaborate curriculum revision program in her school to make revisions in her own courses. If the program of revision suggested in this chapter appears too ambitious for the individual teacher to undertake, it should be remembered that the suggestions mainly involve adaptation and enrichment of the official course of study in a systematic manner.

Relation of the Course of Study to the Curriculum.—The terms *course of study* and *curriculum* are often regarded as synonymous. This confusion has resulted from failure to recognize their respective purposes and scopes. The curriculum consists of all the features of the school environment to which the student reacts. The course of study is the instrument designed to guide the teacher in selecting and arranging the elements of the curriculum so that the student's experiences with various aspects of the school environment will result in desirable learning. The curriculum is the means utilized to attain the objectives of education. The course of study is intended to assist the teacher in the effective use of the curriculum to achieve the desired outcomes of education. Their functional relationship can be indicated by a consideration of the purposes of a course of study. Among the most important purposes are:¹

To provide teachers with aims and objectives of education in general and in every subject.

To provide a guide to local resources and approaches and to content and pupil activities in order to realize the aims and objectives.

To indicate methods and procedures, and proofs of their success.

To set up standards of attainment.

To orient the course in relation to instructional materials of other grade levels.

To coordinate the efforts of the school system.

The Relation of the Official Course to That Made by the Teacher.—The official course of study and that designed by the teacher

¹ *Keeping Pace with the Advancing Curriculum*, Research Bulletin of the National Education Association, Vol. III, Nos. 4 and 5, p. 179.

for use in a particular grade differ in several important respects. The main differences may be summarized as follows :

OFFICIAL COURSE OF STUDY	TEACHER ADAPTED COURSE
<i>Purpose</i>	
To serve as a general guide for a typical teacher in a typical situation	To serve as a specific guide in teaching a particular class in a particular situation
<i>Origin</i>	
Teacher committee or outside authority	Adapted from official course of study by individual teacher
<i>Educational Aims</i>	
General aims of subject outlined	Specific aims of course listed in terms of changes in children's behavior
<i>Content</i>	
Suggested content of considerable variety and scope	Content selected in terms of abilities, maturity, and previous experiences of students to attain specific objectives of the course
<i>Methods</i>	
Variety of teaching procedures suggested which are suitable for typical students	Teaching procedures based upon teacher's knowledge of students in class and relative degree of success experienced with alternative procedures
<i>Time Allotment</i>	
In terms of average student and relative values of many elements	In terms of individual students and relative values of a selected list of topics
<i>Evaluation</i>	
Suggested evaluation in terms of general objectives of course	Evaluation of specific outcomes sought for a particular group of students

3. MAKING THE COURSE OF STUDY

Course of study construction involves numerous important decisions. Judgments are required in regard to the most urgent needs of pupils and the relative values of different learning activities and materials in meeting these needs. Decisions on the inclusion or omission of certain items of content as well as their optimum time allotment and grade placement demand intelligent discrimination.

The teacher occupies an advantageous position in respect to many of these matters. Her close proximity to students in the process of learning, in addition to her familiarity with the subject matter, provides her with invaluable insights into the problems of course of study construction. Many programs of curriculum reconstruction have failed of fruition because of the lack of firsthand knowledge of actual classroom conditions by the participants. Mere proximity to a problem, however, does not insure adequate comprehension of its implication.

In adapting a course of study to meet the needs of a particular group of students, the following steps are suggested.

1. *Obtain firsthand information in regard to the pupils and the social scene of which they are a part.* The most significant types of data are in regard to

- a. The children to be taught, with particular reference to their
 1. Needs—intellectual, physical, and social
 2. General experiential background, including the level of school achievement or previous preparation and out-of-school experiences
 3. General intelligence
 4. Individual and group concerns
 5. General and special interests
 6. Home conditions
 7. Community background
- b. The local community with particular reference to its
 1. Resources—cultural, educational, recreational, and natural
 2. Population—characteristics, nationality, etc.
 3. Attitudes and mores—economic, political, and religious
 4. Adult vocational activities
 5. Recreational facilities for adults and youth
 6. Welfare and youth-serving agencies
- c. The social order, with particular reference to its
 1. Characteristics
 2. Ideals
 3. Deficiencies
 4. Possibilities for improvement
 5. Trends

Firsthand information on the subjects listed above should be obtained in advance, or as the teaching proceeds. Data concerning students may be revealed by an examination of school records, testing, interest questionnaires, interviews, and various observational techniques. Active participation in community affairs provides the

teacher with the best primary source of knowledge in regard to community life. This may be supplemented by informal surveys of community conditions. A thorough knowledge of the local community, augmented by analyses and studies of the general social order, furnishes a basis for the understanding of the problems of society.

2. *Supplement these primary sources of information about individual and social needs with data from various other sources.* Teachers usually do not have sufficient time or facilities at their disposal to acquire at first hand all the data necessary for building a course of study. Hence they have to rely upon secondary sources of information. Some of the readily available sources are

- a. Scientific educational research on curriculum problems by individuals and educational institutions.
- b. Studies of contemporary life by committees of national and regional organizations.
- c. Studies of child growth and development.
- d. Courses of study from other schools, representing the combined judgment of teachers who have given considerable study to curriculum problems. These courses of study may suggest techniques of obtaining data, as well as instructional materials, which may be adapted for use in a particular school. Too great reliance upon material from other schools should, however, be avoided. Without proper adaptation and modification, the inherent evils of the scissors-and-paste method of course-of-study construction manifest themselves.
- e. The opinions of competent persons on economic, educational, and social problems. The considered judgments of "juries of experts" are usually more valid than the superficial opinions of large numbers of persons who have given little time or thought to the issues involved.

3. *Consider which educational needs are met by the home and other agencies.* The school is only one of several educational agencies in our society. The needs of children are so diversified and numerous that no one agency can serve all of them. The school can hardly be expected to assume exclusive responsibility for the total education of children unless it is given supervision over them for a much larger proportion of their time. Recent extensions of educational services downward and upward, as well as the trend toward a longer school day, week, and year, have increased the opportunities of the school to serve more of the needs of children.

The assertion is frequently made that the school should limit its activities to the intellectual development of the child. To accept this

area of child development as the major responsibility of the school does not change its supplementary character. All aspects of the child's growth are so interrelated that his needs cannot adequately be provided for in any single area to the exclusion of needs in other areas.

There is no disposition on the part of thoughtful teachers to usurp the prerogatives of the home and the church in the important areas of education in which they are peculiarly fitted to serve. The limited resources of the school also make it imperative that the latter confine its activities to those matters which are neglected by other institutions.

4. *Ascertain the interests of the pupils who are to be taught.* A knowledge of children's interests can be acquired in informal conversations with them, classroom discussions, observation of their spontaneous activities, simple questionnaires, and conversations with parents.

A list of the observed interests of intermediate elementary grades (4, 5, 6) with suggested activities was recently reported as follows:²

Some Interests Observed in Children of 9-10-11 Years	Provisions for Using These Interests
Small gangs	Group activity, clubs, scouts, etc.
Comics	Literature, language, arts, social studies, and science
Hero worship	Biographies, science, history, sports
Radio, movies	Radio, music, movies
Sports	Physical education, sports, biographies, games, recreational activities
Camping and outdoor life	Nature study, elementary science, hobbies, camping, hikes, trips
Hobbies and collections	Science, reading, social studies, sports, crafts, stamps, etc.
Modern world, politics, and foreign languages	Model crafts, reading, science, letter writing to foreign children, current news and personalities, foreign language—simple approach to or books written for children's use
Science experiments, and animal pets	Science experiments and science collections, photography, care of aquariums and terrariums, insect and animal life, library reading

² John K. Price, "Professional Preparation for Upper Elementary Teaching" in *The Education of Teachers*, National Education Association, p. 192.

Personal consciousness and sex consciousness	Physical education, health (grooming and personal health)
Excitement and adventure, physical restlessness	Sports, library reading, dramatics, creative play and expression, manipulation, good school movies
Sense of growth (rivalry, competition)	Good sportsmanship through games, contests (musical, etc., garden shows, etc.) pride in another's accomplishments
Frankishness (crude sense of humor)	Appreciation of humor in literature, and dramatics, creative dramatics

5. Consider the areas of human experience from which the content of the curriculum should be selected. The major experience areas which determine the scope of the elementary school curriculum may be classified as follows :

- a. Social relationships—social studies, geography, history
- b. Biological and physical science—nature study, animals, plants, rocks, soil, and other geological formations in local community, elementary concepts in general science
- c. The Arts
 - Practical Arts—woodwork, cooking, and sewing
 - Language Arts—reading, writing, art of communication, or speech
- d. The Aesthetics—fine arts, crafts, music, literature
- e. Physical and mental health—physical education, health instruction
- f. Computational experiences

It is essential that the elementary school child acquire basic understandings and skills in each of these areas. In some schools it may be feasible to break the broad areas into smaller divisions or subject areas such as social studies, etc.

6. Formulate objectives of divisions or subjects in terms of desirable child behavior, such as: attitudes, appreciations, understandings, habits, and skills.

A good illustration of the type of objectives for a subject is found in the course of study in the social studies for the primary grades in the Louisville, Kentucky, Public Schools.³ The objectives stated for the social studies in the second grade are as follows :

³ *Tentative Course of Study, Social Studies, Primary Grades, Curriculum Bulletin 8, Part 1, Louisville Public Schools, Louisville, Kentucky, 1947* (printed insert).

SECOND GRADE

The Child and His Relationships in His Community

THROUGH THIS
CONTENT THE
SOCIAL STUDIES
PROGRAM IN THE
ELEMENTARY
SCHOOL CAN
HELP THE CHILD
TO DEVELOP AND
GROW IN

- I. Persons who guard life and property (the policeman, the fireman)
- II. Persons who bring us news (the postman, the newspaper boy)
- III. Persons who supply us with food (the grocer, the baker, the milkman)
- IV. Persons who work to keep us in good health (the doctor, the druggist, the dentist, the school nurse)
- V. Places where we enjoy ourselves (the park, the theatre, the circus)
- VI. Places to which we may go to learn (the school, the church, the library)

UNDERSTANDINGS
AND CONCEPTS

The social studies program in the second grade should provide opportunities for the child to understand

Who his neighbors are

Many aspects of home and business life in his neighborhood

The purposes of neighborhood institutions, public and private

The natural influences upon life in the community

Man's efforts to lighten his work

The results of man's attempts to spend his leisure time in pleasant and satisfying ways

The need for health and safety regulations

HABITS AND SKILLS

The social studies program in the second grade should provide opportunities for the child to grow in the ability to

Use those skills begun in the first grade

Use the public library and its resources

Select and handle books

Use the beginning techniques of research reading

Travel about his neighborhood in safety

Give directions clearly and certainly

Welcome visitors in his home and in his classroom

The Child and His Relationships in His Community

ATTITUDES,
APPRECIATIONS,
AND INTERESTS

The social studies program in the second grade should provide opportunities for the child to develop

An appreciation of his own worth to the community

A respect for public and private property

A desire to cooperate in community enterprise

An appreciation of the contributions made to his welfare through the industry and efforts of his neighbors

A desire to express his appreciation of courtesies shown and services rendered

A desire to acquaint others with the benefits and pleasures his neighborhood affords

7. *Establish the validity of the objectives of the course by relating them to the educational philosophy of the school.* The kind of philosophy of education that most influences school practice is one developed cooperatively and democratically by the teachers within the school. In the formulation of an adequate basic philosophy of elementary education, consideration should be given to

- a. The ideals of the culture out of which the school grows
- b. The role of elementary education in that culture
- c. The characteristics of the local community served by the school
- d. The unique characteristics of the children to be educated
- e. The nature of the learning process
- f. The educational philosophy formulated by teachers in other schools
- g. Concepts of the function and nature of elementary education as formulated by recognized leaders in the fields of education, philosophy, psychology, and sociology, e.g., the theory of experimentation and Gestalt psychology

8. *Consider what modifications are necessary because of limitations of time, equipment, and building facilities.* In some situations, one or more of these factors may impose serious restrictions upon the inclusion of many desirable learning materials and experiences. For example, the number and variety of field trips in connection with science instruction or school excursions by social studies classes will be limited by the proximity of the school to places of educational interest.

9. *Review the grade placement of activities and learning exercises suggested in the official course of study.* Recommendations of grade

placement of materials in courses of study are usually made on the basis of experimentation or the judgments of teachers and experts in regard to the difficulty of the material and the interests of children at different grade levels. The logical arrangement of subject matter has been the deciding factor in allocating many materials of instruction to different grade levels. These recommendations require the careful scrutiny of the teacher in adapting the course to her pupils. Many teachers report that a considerable amount of reading material recommended for certain grade levels is too difficult and does not appeal to the interests of students of those grades. The common learnings needed by all pupils have not been given sufficient consideration in many instances. Content of great social significance for all pupils should be introduced at grade levels early enough so that large numbers of pupils will not have been eliminated.

The teacher should ascertain the mental and social maturity of the students in the class and not forget it when he selects materials. Since the vocabulary used is often the source of students' difficulty in the comprehension of learning exercises, "stepping down" or "stepping up" may be necessary.

10. *Make a time allotment for the subjects included in the curriculum.* A suggested weekly time schedule in the elementary school is as shown on page 283.⁴

11. *Organize the content into units of instruction.* The crucial issue in respect to the organization of material is the question as to what constitutes the proper unifying element. In most subject-matter-centered courses of study, the unifying principle lies within the body of subject matter itself. The chronological sequence of topics in a history course illustrates the type of organization which results from the use of this principle. An increasing number of teachers believe that the student's past experiences and present interests provide the proper integrating basis. With these present elements as a beginning point, the learning activities and experiences should flow out to encompass learning materials more remote in time and space. Thus the history of social organizations would evolve from a study of the present social situation, of which the student himself is a part. An analysis and understanding of the current social scene would be the first phase of study of society.

These two approaches represent the extremes of two points of view. There are many degrees of variation between the two extremes.

⁴ *Manual for Elementary Teachers New to the Denver Public Schools*, Denver, Colorado, 1948, p. 32.

SUGGESTED DISTRIBUTION OF TIME FOR SUBJECTS IN THE
ELEMENTARY SCHOOL*

Subjects	Minutes per Week						
	1B	1A	2	3	4	5	6
Arithmetic.	150	150	150	250	250	250	250
Art (including choice days), Language, Elementary Science, and Social Science	225	225	225	350	350	350	350
Daily Orientation Period—Health and Hygiene**	100	100	100	75	75	75	75
Music (including Music Appreciation).	75	75	75	75	75	75	75
Penmanship.	100	75	75	75	75	75	75
Physical Education	150	150	150	150	150	150	150
Reading Activities	625	550	550	350	350	350	350
Spelling	0	100	100	100	100	100	100
Recess	75	75	75	75	75	75	75
TOTAL	1,500	1,500	1,500	1,500	1,500	1,500	1,500

* This suggested time distribution is on the basis of two groups in the room in a unit-type school. Some adaptations will need to be made in platoon and modified platoon schools. In grades one and two it is desirable to have one instructional period in reading in the morning and another in the afternoon for each group.

** Health education is to be a vital part of all activities.

Whichever approach to organization of content is made, sufficient flexibility should be provided to allow for the special interests and needs of students. In any form of organization, a distinction should be made between materials designed to meet the common needs of all pupils and those intended to serve individual needs. Another factor in organizing materials is the advisability of correlating them with materials from other fields. The relative value of the topic, the availability of instructional materials, and the possibilities of leading on into related topics should determine the size of the unit of instruction.

12. *Make a tentative time allotment to each unit on the basis of its relative significance in achieving the objectives of the course. In making decisions in regard to the optimum time allotment for each*

phase of a subject, the teacher is confronted with a mass of important material and a very limited amount of time in which to present it. The teacher should therefore recognize the implications of each decision he makes in regard to time allotment. The time allotment cannot, however, be made solely on the basis of the content involved. The abilities and experiential backgrounds of the students are of paramount importance in every case where the element of time is involved.

13. *Select from the teaching procedures suggested in the official course of study those which appear to be best adapted to the pupils concerned.* Consideration should be given to the manner in which the factors in the learning process operate in a given situation. Problems of pupil interest, motivation, recognition of the significance of various topics, and emotional factors which influence learning all vary considerably from one group of pupils to another. Teaching procedures should be governed by the principles of effective learning. This can be illustrated by reference to the principles of apperception and self-activity in learning. A student's reaction to a learning situation is greatly influenced by his past experiences of learning. According to the law of apperception new learning has to be built on previous learning. In other words, teachers must begin with children where they actually are. Their present stock of knowledge, prejudices, and skills may be assets or liabilities, but these are the foundations on which present and future learnings must be built.

Progressive educators may seldom refer to apperception, but many of their practices in curriculum construction and methods are based upon it. In the experience curriculum, for example, the point of departure is the past and present experiences of students. In fact this method of approach represents one of the main differences between the experience and the subject-matter types of curricula, both of which utilize subject matter.

Since self-activity is essential in learning, provision should be made for pupils to become active participants in every learning situation. In the acquisition of skills, the need for self-activity is obvious. The principle of self-activity, however, is equally applicable to the higher mental processes such as analysis, organization, and reasoning. In most school subjects, many opportunities can be provided for self-expression in the form of discussions, planning study procedures, conversation, drawing, and writing.

14. *Evaluate outcomes in terms of the stated objectives.* Evaluation should be continuous throughout the course, but a summary of the outcomes achieved should be made in the final phases. Measure-

ment provides one basis for evaluation. Until recently measurement was confined to the more tangible outcomes of instruction, such as mastery of factual material. In Chapter 19 of this volume there are descriptions of instruments for measuring some of the important outcomes, such as ability to apply knowledge, reasoning, etc. For purposes of evaluation, the data obtained from test scores should be supplemented by anecdotal records, examination of written and other original work, and the various observational techniques mentioned in Chapters 18 and 19.

15. *On the basis of the results achieved, make a tentative revision of the course of study.* Notations can be made of needed changes for future reference. The final revision should await the time when the teacher has had the opportunity to know the students in the new class.

The Block Program.—The daily schedule of activities should be sufficiently flexible to provide for the inclusion of unexpected topics which offer possibilities for valuable learning experiences. The block program represents a variation from the formal schedule which has been found to be useful in many elementary schools. The main features of a block program are as follows:

BLOCK PROGRAM ⁵

The block program provides for long periods of time during which related subjects may be treated, briefly or in detail, as pupil needs indicate.

Planning Period

On-going activities may be surveyed and plans made on paper or the blackboard, for carrying through old and new problems. Plans for activities on which groups or individuals are to work while the teacher is occupied with other groups may also be recorded. The children may plan to keep records of room temperature, collect pictures, illustrate topics, construct models in relation to planned work, practice reading, writing, and number skills.

Since the primary children are in the process of making many new adjustments, plans especially for them should include. Ways to move around and get materials without disturbing others, reminders to talk quietly in consideration of others, ways to share, and procedures for asking help from older persons.

Upper grades may have special responsibilities to help younger children by setting an example and giving courteous aid when necessary. They may also plan and assume responsibility for daily activities, the physical education period, or the lunch hour. A teacher may guide the planning toward work in social studies, language arts, or any area where enthusiasm is high and new

⁵ *Better Schools for Kansas Children, A Handbook for Teachers.* Issued by Adel F. Throckmorton, State Superintendent of Public Instruction, Topeka, Kansas, July, 1949, pp. 39-42.

ideas have evolved since the day before. In these groups boys and girls show much originality and their discussions give them strong purpose for the day's work.

Block Program for Elementary School

Schedule for Grades 1-2-3

TEACHING-LEARNING EXPERIENCES

Periods	Monday	Tuesday	Wednesday	Thursday	Friday
9:00- 9:15	Exchange of greetings; disposal of wraps; news and interesting experiences; care of room; songs; and announcements				
9:15-10:15	Social Studies Area Planning for the day.* Units of work from the social content area which combine subject matter in history, geography, and science with reading, discussion, and many types of firsthand experiences				
10:15-10:30	Rest, recreation, supervised play, attention to health habits				
10:30-11:30	Reading Groups Supervised individual reading; remedial work with individuals and small groups, drill on basic skills, library books. Use of basic and supplementary readers				
11:30-12:00	Language Arts Oral and written expression; speech correction; spelling; handwriting				
12:00- 1:00	Noon intermission—directed playground activities				
1:00- 1:30	Music Rhythms; poetry appreciation; story telling; dramatization				
1:30- 2:00	Arithmetic Problem solving, drill on fundamental skill; emphasis upon understanding number concepts and application to daily living and other school activities. Informal arithmetic only in first grade				
2:00- 2:30	Recreation, health guidance				
2:30- 3:30	Guidance in free reading; remedial instruction; creative expression; demonstration; oral language activities; art; evaluation of the day's work				

Schedule for Grades 4-5-6

TEACHING-LEARNING EXPERIENCES

Periods	Monday	Tuesday	Wednesday	Thursday	Friday
9:00- 9:15	Miscellaneous duties—announcements, attendance, care of room and equipment, special activities				

* Pupils and teacher together should plan the work of each period so that each child understands a reason for what he is to do.

- 9:15-10:15 Social Studies Area
 Planning for the day.[†] Discussion of mutual problems.
 Units of work in history, geography, science. Reading from
 textbooks, and supplementary materials. Introduction to use
 reference books. Use of visual aids
- 10:15-10:45 Recreation; safety education; health education
- 10:45-12:00 Language Arts
 Oral and written expression, spelling, handwriting
 Group and individual work upon basic skills
- 12:00- 1:00 Noon intermission
- 1:00- 1:40 Mathematics
 Understanding new arithmetic processes; practical applica-
 tion of arithmetic concepts; drill upon skills; problem solving
- 1 40- 2:30 Reading
 Introduction to literature; reading for fun; library period;
 reading activities for individuals and small groups
- 2:30- 3:00 Safety education; guidance in health; recreation
- 3:00- 4:00 Appreciation
 Music, vocal and instrumental, fine arts; crafts; exhibits;
 demonstrations; reports; stories; dramatizations; summary
 and evaluation

Schedule for Grades 7-8

TEACHING-LEARNING EXPERIENCES

Periods	Monday	Tuesday	Wednesday	Thursday	Friday
	Pupil-teacher planning of day's work.*				
9:00-10:00	Literature Reading activities for groups and individuals. Special assist- ance to remedial cases. Use of library. Introduction to reading materials of all types				
10:00-10:45	Health and physical education; safety; physiology; personal hygiene; recreation				
10:45-12:00	Social Studies Area History, geography, science, citizenship, international rela- tions				
12:00- 1:00	Noon intermission				
1:00- 1:40	Mathematics				

[†] Pupils and teachers together should plan the work of each period. The teacher should determine whether planning by periods or for the whole day gets the best results.

* This may be done for the day or for a longer period. If children in these grades have had practice in planning, they will be ready to plan for larger blocks of time.

- 1:40- 2:30 Language Arts
Oral and written expression, discussions; compositions, reports, spelling, speech correction
- 2:30- 2:45 Recreation
- 2:45- 4:00 Appreciation
Music, vocal and instrumental; fine arts; crafts, assemblies, reports, demonstrations, evaluation of work

Schedule for Grades 1-8

(Particularly recommended for one-teacher school)

TEACHING-LEARNING EXPERIENCES

Periods	Monday	Tuesday	Wednesday	Thursday	Friday
9:00- 9:15	Preparing for the day.*	Health, disposal of wraps, exchange of news, care of room, songs, announcements			
9:15-10:15	Reading Group reading, individual aid, remedial work, work-type activities and drill on basic skills, library books, and supplementary readers, science. (Supplementary reading in grades 1-4)				
10:15-10:45	Health education, safety, personal hygiene, and recreation				
10:45-12:00	Social Studies Area Planning period. Development of study units from areas of geography, history, government, Kansas history, science, and international relations				
12:00- 1:00	Noon intermission				
1:00- 1:40	Mathematics Work-type activities to develop meanings. Drill upon fundamentals				
1:40- 2:30	Language Arts Usage, composition, oral expression, writing and spelling				
2:30- 2:45	Planned recreation				
2:45- 4:00	Appreciation Reading for fun, music, art, stories, dramatizations, oral language activities, exhibits, experiments, reports. Evaluation of day's work				

4. THE SELECTION OF INSTRUCTIONAL MATERIALS

In the modern elementary school the curriculum consists of a great variety of learning materials. One of the resources of learning ex-

* Pupils and teachers together should plan the work of each period. The teacher should determine whether planning by periods or for the whole day gets the best results. Plans should be written and an evaluation made before children go home.

periences is represented by printed materials in the form of textbooks, supplementary books, pamphlets, magazines, and newspapers. Elementary school pupils should be taught to use these materials effectively. Equally important is the establishment of strong interests in reading these materials. The acquisition of these interests is largely dependent upon the intelligent selection and effective presentation of reading materials by the teacher. It is essential, therefore, that the teacher be familiar with the available reading materials which are suitable for children of her age group. In some schools, the teacher is provided with suggested lists of books, from which she may select those which appear to be most appropriate in terms of the concerns and needs of her class. Intelligent decisions by the teacher in regard to reading materials for use in her class demand an understanding of the relative values of these materials. A knowledge of the criteria for evaluating the materials and the best procedures for selecting the materials is also essential.

Overemphasis Upon Textbooks.—The unfortunate effects of overdependence upon textbooks are numerous and far-reaching. Most important of all, the reciting of words is considered as the index of understanding. It results in temporary, superficial results instead of permanent mastery. It is a deadening procedure devoid of interest for the great majority of pupils. It robs most school subjects of their richness and value. It does not result in abilities to apply the subject to a variety of life situations. It does not encourage the teacher constantly to learn more about her subject and to plan better methods of teaching. It encourages verbalism—the learning of words without understanding—and finally it results in concentration upon information and the neglect of ideals, attitudes, interests, concepts, and tastes as objectives of learning.

In addition to these limitations, dependence upon *one* textbook possesses other dangers. The course of study is then limited largely to one author's theory of education and his abilities to devise effective learning materials. The class and the teacher are committed to the author's emphasis, improper or otherwise. They are also dependent upon various divisions or types of material in the subject as well as the author's ideas of the selection and arrangement of materials regardless of the needs, backgrounds, and interest of the pupils of a given class or the needs of a given community.

Textbooks are restricted not only in point of view but also in scope. Because of price limitations they are small, condensed, and hence too often artificial and uninteresting. This is especially unfortunate in

history, the sciences, and the social studies, where it is better to assign twenty or thirty pages a day of interesting material than four or five pages of material written in the encyclopedia style. Textbooks are also written so as to be "teachable" by mediocre teachers rather than to exercise the full powers of superior teachers and are hence not of the highest type of learning materials. They are frequently censored, distorted, and incomplete so that they will not offend ignorant or selfish groups of laymen who would prevent their use in the schools. Furthermore, textbooks get out of date in a few years and are commonly used for five to ten years after they should have been discarded.

Values of Textbooks.—Textbooks are not without values. Many teachers would be practically helpless without textbooks, particularly beginning teachers and older ones whose knowledge of the subject is no longer adequate to the needs of modern life. The experienced teacher of good preparation and superior abilities may employ the textbook to advantage along with other aids—supplementary readings, discussions, and visual and auditory aids. This is particularly true if a very superior textbook is employed.

Among the more important values of the textbook the following may be mentioned:

1. It furnishes an outline which the teacher may use in planning the work of the semester or the year.
2. It brings together in one volume a great deal of the more important information in a given field.
3. It usually contains some serviceable teaching aids, such as pictures, charts, diagrams, questions, problems, maps, summaries, outlines, headings, exercises, and table of contents.
4. It serves as a permanent record for future exercises later in the course, e.g., reviews.
5. It saves the teacher much time in presenting material or finding material for students to read in the library.
6. It enables the learner to take home with him in convenient form some of the more important materials for study.
7. It facilitates the making of assignments—though often assignments of inferior grade.
8. It provides a uniformity in the learning materials of pupils which is desirable to some degree, particularly for the purposes of class discussion and testing.
9. It provides a logical organization, though by so doing it deprives the learner of the responsibility for organizing and hence of the educational training involved.
10. It relieves the teacher of responsibility for evaluating much of the material of the course; more time is thus made available in

class for discussions, explanations, assignments, the use of visual aids, and other activities.

11. It unifies the study of the class around a definite specific topic.
12. It avoids the confusion which may result from the attempts of pupils to organize a mass of facts from various sources.

Using the Textbook.—Many suggestions for the effective use of textbooks may be drawn from the foregoing list of values. Among the more important suggestions are the following :

1. Select the best available textbook. (See later pages for suggestions on selecting textbooks.)
2. Supplement its use by discussions, collateral readings, and pupil activities of a wide variety.
3. Avoid "recitation" of textual materials. Make assignments which call for understanding, evaluation, criticism, interpretation, application, and supplementation.
4. Teach pupils how to read the textbook critically and understandingly.
5. Teach pupils how to use the various aids included in the textbook, e.g., the table of contents, the index, marginal and other headings, study questions, visual material, etc.
6. Avoid asking pupils to recite details. Instead call for main thoughts, applications, and the like.
7. In some classes, particularly in history, an introductory survey or rapid reading of the text is useful, to be followed by a more thorough, slower study of the text and collateral material.
8. Adapt the textbook and other materials to the individual and to the various levels of ability of the class.

There are certain practices in the use of textbooks which should be avoided in classes in history, the sciences, the social studies, and other content subjects. The one-book teacher in these subjects cannot possibly be a superior teacher. By relying exclusively upon one textbook, she is failing to train pupils in the skills of comparison and of synthesis of materials from more than one source. The students will also lack training in library skills and habits and other important educational results which will remain long after most of the textbook content has been forgotten. The citizen of tomorrow must read current materials not only in books but in periodicals and newspapers and must know where to look for and how to interpret such materials.

The teacher in the content subjects should avoid overemphasis upon "recitation" of textbook materials. She should instead encourage the organization of material from textbooks and other sources around problems and questions, particularly those of current importance and

interest. She should avoid using too much of the class period for oral testing over the textbook material and instead leave the majority of the time for socialized discussions, telling by the teacher, pupil reports, supervised study, and other effective learning activities.

In all subjects the teacher should subordinate "textbook covering" to efforts to achieve the objectives of the course in terms of learning or child growth. She should not make the error of having pupils "learn" the textbook, trusting thereby to achieve the objectives. She should at all times keep in mind that the textbook is not the course itself but only one valuable instrument for teaching and that it must be used intelligently. It must also be supplemented daily by one or more of a wide variety of teaching and learning materials and devices.

Selection of Textbooks.—While theoretically the classroom teacher makes the course of study for the subjects she teaches, in many instances her principal role in making the course consists of selecting the textbook. Once the textbook is selected the general pattern of the course is determined, at least to the extent that the textbook is emphasized. This is true whether the textbook is the student's only aid or is used as a reference book along with other textbooks, references, and collateral readings or is supplemented with workbooks, field trips, visual aids, and other instructional materials and methods.

Because of the degree to which the textbook determines or constitutes the course of study, great care and intelligence should be exercised in selecting it. On the basis of replies to a questionnaire sent to 465 teachers in regard to the criteria which should be used in selecting elementary school textbooks, Underwood^a compiled the following list:

I. AUTHOR

- | | |
|---|---|
| 1. Training | 7. Participation in scientific investigations |
| 2. Experience | |
| 3. Can write for children | 8. Previous publications |
| 4. Reputation | 9. Present activity |
| 5. Authority in field | 10. Unclassified |
| 6. Familiarity with scientific investigations | |

II. CONTENT AND ORGANIZATION

- | | |
|-------------------------------------|-----------------------------------|
| 1. In harmony with educational aims | 4. Consistent point of view |
| 2. Teachable organization | 5. Adequately covered field |
| 3. Scientific basis for | 6. Modern character of situations |

^a Willis O. Underwood, *The Analysis and Selection of Elementary School Textbooks*, unpublished thesis—University of Colorado Library, pp. 45-47.

- | | |
|--|---|
| 7. Balance of content | 21. Develop proper attitudes, habits, skills |
| 8. Accuracy | 22. Obsolete topics eliminated |
| 9. Psychological approach (present concepts of learning) | 23. Material not biased |
| 10. Organized around large themes | 24. Possible omission of material without destroying sequence |
| 11. Tested in classroom | 25. Organized within selections |
| 12. Correlated with other subjects | 26. Material suited to age of child |
| 13. Meet needs of pupils | 27. Length of stories, units, etc. |
| 14. Meet needs of community (social aspect) | 28. Adaptable to Mastery-unit technique |
| 15. Unity of material | 29. Adequate details |
| 16. Sequence of material (sound) | 30. Ideals of high grade human living |
| 17. Adaptation to specific needs | 31. Vision of man's relation to his environment |
| 18. Adaptability to needs of schools | 32. Correct standards and ideals in use of English |
| 19. Suitable to both rural and graded school | |
| 20. Material addressed to pupils | |

III. VOCABULARY AND READABILITY

- | | |
|--|---|
| 1. Controlled vocabulary (word lists) | 5. Good sentence structure |
| 2. Concepts on level of child | 6. Provision for vocabulary enrichment |
| 3. Technical words defined before used | 7. Not too many new words introduced per assignment |
| 4. Style clear and lucid | |

IV. METHOD AND MOTIVATION

- | | |
|---------------------------------------|--|
| 1. Interesting material | 8. Develop permanent interest in reading |
| 2. Introductions, previews, questions | 9. Provision for supervised study |
| 3. Activity programs | 10. Flexibility of method |
| 4. Standards and self-appraisals | 11. Sincerity of approach |
| 5. Emphasis on thinking-creative work | 12. Develop general principles |
| 6. Well illustrated | 13. Apply general principles |
| 7. Rich and varied experiences | |

V. TEACHING AND STUDY AIDS

- | | |
|--|----------------------|
| 1. Teachers' manuals and guides, etc. | 6. Appendix |
| 2. Tests to accompany book | 7. Glossary |
| 3. Testing program within book (norms) | 8. Table of contents |
| 4. Workbook to accompany book | 9. Preface |
| 5. Index | 10. Summaries |
| | 11. Marginal notes |

- | | |
|--------------------------------------|--|
| 12. References | 19. Provision for individual differences |
| 13. Title page | 20. Questions, exercises and drills |
| 14. Charts, maps, tables, statistics | 21. Norms to recognize ability groupings |
| 15. Pronunciation aids | 22. Adequate accompanying forms |
| 16. Reviews (simple and cumulative) | 23. Biography |
| 17. Remedial material | |
| 18. Examples and explanations | |

VI. MECHANICAL MAKEUP

- | | |
|-------------------------------------|---|
| 1. Print (type) | 9. Weight of book |
| 2. Spacing of words and letters | 10. Durability |
| 3. Paper | 11. Length of line |
| 4. Width of margins | 12. Paragraphing |
| 5. Binding | 13. Open, block page (page arrangement) |
| 6. Shape | 14. Size of book |
| 7. Washable backs | |
| 8. Attractiveness and color of book | |

VII. MISCELLANEOUS

- | | |
|--|--|
| 1. Copyright date | 9. Availability of book |
| 2. Students' opinions | 10. Opinions of others (number of adoptions) |
| 3. Price | 11. Special features |
| 4. Demands of economy | 12. Series in which book belongs |
| 5. Number of pages in relation to cost | 13. General merit |
| 6. Exchange value | 14. Type of book |
| 7. Fit course of study | 15. Demands of teachers for certain changes |
| 8. Publisher | |

Textbook Improvement.—There is strong evidence that textbook publishers are becoming increasingly aware of the need for better textbooks. Some of the aims of the publishers for improvement of textbooks are as follows :

1. To print more vigorous and vital texts of greater human interest, permitting more illustration and graphical explanations
2. To present greater resources of materials in the way of type, paper, illustration, binding, etc.
3. To use several different printing processes
4. To promote a greater use of color
5. To present more beautiful bindings ⁷

⁷ W. A. Kittredge, "Five Years' Progress in School Book Design," *Publishers' Weekly*, CXXXIX, 1937.

5. THE SELECTION AND USE OF WORKBOOKS AND SUPPLEMENTARY READING MATERIALS

The Use of Workbooks.—The limitations of textbooks, of the number and variety of exercises provided by teachers, and of the quality of assignments made by teachers led to the development and use of workbooks. The workbook is so called because it provides “work” for the student to do—questions to answer, problems to solve, projects to undertake, drill and practice materials, tests, and remedial assignments. It has in recent years come to be rather widely used.

Although controlled experimentation in the use of workbooks has not definitely established the degree of their value, some of the experiments have indicated that pupils’ performance on written tests was more satisfactory in classes in which workbooks were used than in those where they were not used. The experiments, however, throw little light on the matter of how much time of teachers was saved for other work by the use of workbooks. Most of the experiments were conducted years ago when the workbooks available were not generally of superior quality and often not coordinated with the textbook and other phases of the course.

Values of Workbooks.—Among the values of the workbook the following may be mentioned :

1. Provides definite assignment of supplementary material
2. Makes practice and review materials readily available
3. Provides wider variety of learning activities
4. Supplies student with copy of assignments
5. Provides for individual differences by.
 - a. Variety of tasks for different interests
 - b. Diagnostic tests—some for self-diagnosis
 - c. Remedial materials keyed to diagnostic tests
6. Furnishes study materials for home work and study halls
7. Saves time in class period ordinarily used in copying exercises
8. Provides training in self-direction and independent study
9. Provides a simple means by which pupils can study while absent from school and thus make up work missed
10. Saves time of teacher for other work

Not all these advantages apply to all workbooks. Some workbooks do not possess qualities or contain materials contributing to one or more of the above advantages.

It should be evident that the workbook does not relieve the teacher of the responsibility of planning the daily work, including use of the

workbook. She must plan to use the workbook as a supplement to the textbook, coordinating the two. She must plan assignments in advance in terms of differences among the learners in ability, interest, and need. Most workbooks should not be followed closely. The teacher will unquestionably lack skill at first in the use of the workbook. Skill will have to be developed through study and experience.

Weaknesses and Dangers.—The lack of positive experimental results markedly favorable to the use of the workbook is indicative of the limitations inherent in their use. The following limitations should be recognized and kept to a minimum by careful planning :

1. Lack of coordination with the textbook
2. Some material not adapted to interests or abilities of class with which workbook is used
3. Materials not well graded
4. Failure of some materials to contribute much to the objectives of the course ("busy-work," blank-filling, petty questions, etc)
5. Lack of sufficient choice in the references to books and periodicals to take care of lack of library materials in the local school
6. Failure to provide materials especially for bright pupils and for slow or dull pupils
7. Abuses in use of workbooks :
 - a. Lack of careful planning by teacher
 - b. Acceptance as self-teaching devices
 - c. Lack of adaptation and correlation with course
 - d. Overemphasis upon nonessential outcomes

Criteria for Judging and Selecting Workbooks.—In selecting workbooks for use in elementary school classes the following criteria should be kept in mind :

1. The workbook should be used as a supplement to and not as a substitute for the textbook.
2. The workbook should provide amply for reading of references on each of the topics and units.
3. The readings, problems, exercises, and other materials should be systematically correlated with the textbook and should supplement it intelligently. For this purpose a workbook especially constructed for use with the adopted textbook is preferable.
4. The vocabulary and style of writing of the workbook and the references included in it should be appropriate for the pupils who will use it.
5. The learning activities included should be adapted to the interests, the abilities, and the previous background of the students.
6. The learning activities should include some adapted to the interests and abilities of weaker students and some which are appro-

priate for the abler ones. Variation in interests should be provided for.

7. The learning activities should be appropriately distributed with respect to the different objectives of the course, including ideals, attitudes, interests, and tastes as well as information and skills.
8. There should be ample provision for diagnostic checking on possible failure of individual pupils in any of the more important outcomes of the course.
9. There should be optional material (in most subjects) for drill upon weak points of individual pupils as discovered by the diagnostic devices.
10. If checking or grading by the teacher is contemplated, it should be provided for in such a way as to be economical of the teacher's time.
11. The learning activities should for the most part be self-explanatory or sufficiently explained to require a minimum of explanation by the teacher.
12. There should be some "shutoff" device to avoid the continuance of study and learning activities far beyond the point of adequate learning.
13. The contents should be in attractive form.
14. The workbook should be mechanically sound, that is,
 - a. Sufficiently well bound to last through the course.
 - b. Printed in a type size appropriate for its users.
15. Where materials are to be handed in or checked by the teacher, the pages involved should be readily detachable and should provide a blank for the student's name.

Elementary School Library.—One of the most significant developments in elementary education within recent years has been the development of the school library. The need for adequate libraries for high schools was recognized many years ago. In the case of high schools, considerable impetus was given by accrediting agencies. In elementary schools the development has been largely the result of the recognition by teachers of the need for enriching the school and other life experiences of the elementary school pupil. In the better elementary schools of today the school library is considered one of the main resources in the education of pupils.

The classroom teacher in one of those schools has the opportunity and responsibility of recommending books for the use of her class. She may wish also to supplement the central library collection with books for her classroom library. Thus it is essential that the elementary teacher know the books which are available for children and formulate methods for their wide and intelligent use.

Many schools make booklists available to teachers. These lists can be supplemented by those from book publishers, and book sections of magazines and newspapers.

Numbers of interesting and valuable children's books are available for use in elementary schools. Many of these books can be used to supplement textbooks in the content subjects; however, they have important values other than merely *supplementing* textbooks. Because of their wide variety and interesting style, these books can serve to broaden and enrich children's experiences. New interests may be developed and old ones reinforced by wide reading of properly chosen books. The teacher's efforts in stimulating and guiding her pupils is a rich and rewarding activity. Some of the methods which teachers have found useful in stimulating and extending children's interests in books are as follows:

1. Arranging book displays
2. Making trips with children (beginning in third grade) to public libraries
3. Discussing favorite books of individual pupils with class
4. Organizing informal book clubs in class
5. Having book talks by persons interested in children's books
6. Having class illustrate and dramatize stories in books
7. Discussing stories in class
8. Making scrapbooks of favorite books

The teacher can obtain information in regard to children's books by reading the reviews in such publications as:

The Booklist published regularly by the American Library Association
Childhood Education
Saturday Review of Literature

Books as Collateral and Supplementary Reading.—Since most textbooks contain only a limited amount of material, highly condensed, there is a need for additional reading materials, especially in the content subjects. Among the most important types are the following:

1. Materials which develop more intensively and thoroughly one or more phases or units briefly treated in the textbook
2. Materials relating to topics omitted from the textbook which the teacher may think best to assign to one or more of the students
3. Materials which differ in point of view from those in the textbook
4. Materials written in a different and perhaps more interesting or attractive style

While it is frequently useful to assign *collateral* readings in other textbooks, they are usually not sufficient. Supplementary readings are also needed. Supplementary readings are materials which fall into the first three categories mentioned above—materials which do not merely parallel the textbook but extend beyond its scope. They treat topics much more intensively and in much more detail than the textbook. They may contain materials which relate to topics perhaps not even mentioned in the textbook.

Using Collateral Readings.—Among the ways in which collateral readings may be used to advantage are the following :

1. The class may be given definite assignments by title and page for which all are to be held responsible. This is simply an extension of textbook teaching but is often useful in widening the scope of material and in introducing new or different viewpoints or treatments.
2. The class may be given, from time to time, a list of supplementary materials from which they may select what they wish, being responsible not for pages but for the mastery of topics, problems, or questions. This plan is very much to be commended in instances where the subject is of sufficient interest to insure that a considerable portion of the class will search in the extra-text materials. The value of the contribution of material not found by others and the pride engendered in the contributor add greatly to the interest and life of the class.
3. Individual reports should be used much more widely than is commonly done. In this fashion the brighter individuals may be given additional opportunity, and often the uninterested student may be roused to take interest in the work if an assignment of a particularly attractive type is given to him.
4. Collateral reading may be employed in planning flexible or differentiated assignments.
5. Where the problem or project method of teaching is employed, collateral reading in connection with the problem or project is not only desirable but essential.

Magazines and Newspapers.—There is considerable evidence to indicate that children in the upper elementary grades read magazines and certain sections of newspapers. Among the most popular magazines are: *American Boy*, *Boy's Life*, *American Girl*, *Young America*, and *Popular Mechanics*. These should be made available to pupils in each school. The stories and articles may serve as a point of departure for certain units of instruction or other class activities. Some of the materials in magazines and newspapers may serve as sources of in-

formation for pupils who are studying problems of present-day life. In the use of these materials in the classroom, the basis of discriminating reading may be established. Perhaps if teachers and parents, who object to children reading only the comic and sport pages, would devote some time to guiding children's reading, the children would acquire broader interests in their newspaper reading.

QUESTIONS, PROBLEMS, AND EXERCISES

1. What factors should be considered by a teacher in the selection of learning activities for a given age group of children?
2. Formulate a list of objectives which should serve as guideposts in the construction of a course of study.
3. How may the classroom teacher assist in the selection of textbooks?
4. What supplementary materials may be used to supplement textbooks in the grade you plan to teach?
5. What changes in the use of textbooks have resulted from changes in classroom methods and curricular reorganization?
6. Select the three criteria which are of the greatest importance in selecting a textbook. Justify your selection.
7. Evaluate two standard textbooks of recent publication upon the basis of the suggested criteria.
8. Outline a plan for the effective use of textbooks in one of the subjects you plan to teach.
9. Discuss the advantages and disadvantages of free textbooks.
10. What factors should be considered by the teacher in making a decision to use a workbook in her course?

Chapter 16

AUDIO-VISUAL AIDS TO LEARNING

The building of accurate concepts is essential to learning. Unless the learner can associate the written or spoken word with some past or present experience, the resulting concept most likely will be vague and meaningless. The effective use of books is dependent upon numerous rich and meaningful experiences of elementary school children in their natural and social environment. The multiple approach through ear, eye, and touch contributes to more effective initial learning and greater retention.

In order to assist pupils in acquiring an experiential background for reading and vocabulary, elementary school teachers utilize many types of audio-visual aids. Recent research reveals that, with the exception of films, more extensive use of audio-visual aids is made in the elementary school than in either the high school or college.

In many elementary schools objects are brought into the classroom, identified, and used. Elementary science laboratories have been established. Dramatizations and construction projects represent important pupil activities. Firsthand acquaintance with the children's immediate environment is acquired by observing individuals at work, talking with the postman and fireman, and by making trips to gardens, parks, and stores.

While firsthand experiences provide, no doubt, the soundest foundation for learning, the practical limitations upon the scope and variety of these experiences make it necessary for the teacher to utilize many audio-visual aids in the classroom. Fortunately there are many valuable and inexpensive aids available for classroom instruction

1. VISUAL AIDS AND THEIR VALUE

The most notable contribution of science to the development of visual aids has been the motion picture. As a result of its spectacular characteristics and wide general acceptance, it has been considered as synonymous with visual education. This, however, is an erroneous conception, as there are various types of visual aids, each possessing

its own distinctive value. Among the most readily available and usable are :

1. Projected pictures
 - a. Films
 - b. Film strips
 - c. Opaque projections
 - d. Slides
2. Unprojected pictures
 - a. Photographs, prints, paintings
 - b. Textbook illustrations
 - c. Pictorial pamphlets
 - d. Postage stamps
 - e. Stercographs
3. Graphic materials
 - a. Cartoons
 - b. Charts
 - c. Diagrams
 - d. Graphs
 - e. Maps and globes
 - f. Posters
4. Objects, models, and specimens
 - a. Biological specimens
 - b. Dioramas
 - c. Working models
 - d. Museums

On the basis of results obtained by the use of visual aids in classrooms over a considerable number of years, sufficient evidence is available to reveal clearly their effectiveness in teaching. This conclusion is supported by the findings of educational experimentation. Among the values of visual aids revealed by educational research and actual classroom use, the following appear to be the most significant. Not all of them are equally applicable to all types of aids.

Arousing Pupil Interest.—Reference has been made in the preceding section of this chapter to the technical difficulties which students encounter in making verbal experience meaningful. Another obstacle to effective learning is the student's attitude toward certain materials of instruction. A literary classic as presented in a printed volume may be very unimpressive or even forbidding to a pupil. A good screen version of the classic is likely not only to contribute to understanding and retention but also to arouse a compelling desire to read the book.

Supplementing Knowledge Obtained from Other Sources.—Knowledge for its own sake is unimportant. As the basis of sound judgment and appreciation it is fundamental. To be well informed is to possess the first essential of effective, intelligent action. Visual aids not only enable the student to see information from books in a new light, but they also add to his fund of knowledge and thus help him to see the facts gleaned from textbooks in their proper relationships.

Enlarging the Environment of the Individual.—By the proper use of visual aids, a student may live realistically and vicariously in environments remote in time and space from his immediate surroundings. The Congo River may appear to a pupil as only a crooked line on a map. A motion picture makes him realize that it is a surging turbulent stream and thus furnishes such a background of imagery that rivers on maps are no longer mere verbal or diagrammatic abstractions. In history, films portraying the struggles of our forefathers in establishing this nation give the student a vivid understanding of early American history which cannot be gained from verbal descriptions.

Promoting of Intellectual Curiosity.—A well-chosen photograph or film of a scene of historical significance is most likely to arouse an interest in the study of the event. Pictures of places of geographical interest serve to promote the reading of books on the subject or to create a desire to visit the place. The curiosity aroused in a school boy by a photograph in a geography textbook may become the source of his interest in the people of another country. It is far from the truth that children's interests are necessarily limited to their immediate environment. While students should be interested in living conditions in their immediate neighborhoods, it is likewise important for them to have a desire to know how people live in other parts of the world.

Contributing to Greater Acquisition and Longer Retention of Learning.—The intensity and accuracy of impressions received through the eye are conducive to more lasting imagery. Basing his statement on results of an experimental investigation of the comparative effectiveness of pictorial teaching aids in safety education, Goodman makes the following generalization:¹ "The investigation

¹David J. Goodman, "Comparative Effectiveness of Pictorial Teaching Aids," *Journal of Experimental Education*, XII, 20-25.

offers additional research [indicating] that all the pictorial media [in this investigation, the media consisted of sound film slides and silent film slides] aid materially in the learning process for both immediate and delayed recall, and for groups of both high and low I.Q." The relative effectiveness of concrete experience as compared to verbal instruction is dependent upon the nature of the instruction and the student's previous experience with the visual aids used in instruction.

Economy in Time in Instruction.—A concept of an object or a process can be established through the eye in a small fraction of the time required to read a description of it. During the second World War it was necessary to provide maximum training in minimum time for millions of members of the armed forces and workers in war industries. To achieve this objective, films were utilized on an unprecedented scale. Estimates² of the amount of time saved in the training of technicians for war plants and the military forces range from 25 to 75 per cent. Careful selection of visual teaching materials in terms of the desired outcomes and effective procedures in their use may make similar savings possible in classroom situations. In a summary statement of research in visual education Dale³ states, "More than fifty such experiments (of varying scientific exactitude) offered the almost unanimous conclusion that films conveyed information in ten to twenty per cent less time than usually required by other methods."

Use in Fostering Favorable Attitudes for Learning.—Novelty and variety may be introduced into classroom situations by means of visual aids. Monotony promotes boredom, which is detrimental to the formation of favorable attitudes toward learning activities. While entertainment is seldom the main outcome to be sought in the presentation of visual aids, joyous attitudes are desirable concomitants of any educational activity. The humor of exaggeration, present in some educational films, serves a useful purpose. A recent film on safety education for schools utilized humor in an effective manner by portraying the harrowing experiences of a simpleton who disregarded traffic signals, placed ladders at improper angles from buildings, and failed to observe open manholes in sidewalks.

² See report of Commission on Motion Pictures in Education of the American Council on Education in *Motion Pictures for Postwar Education*, VIII, 3.

³ Edgar Dale, "The Real Film Problem," *Ohio State University News Letter*, X, 1-4.

2. DETERMINING WHAT AIDS TO USE

When it appears that some type of visual aid will serve a useful purpose in a particular classroom situation, the teacher is required to make a decision in regard to what type of aid to use. The type most suitable in a given situation is dependent upon several factors. The standards for selection of a particular visual aid are more specific. They will be considered later in this chapter in the discussion of each visual aid. Among the factors which should be considered in selection of the type of visual aid are .

1. *The degree to which the type of aid is adapted to the objectives and problems of the course.* For example, if the desired outcome is the understanding of a process involving motion, the motion picture is particularly suitable; in the physical sciences demonstrations of the action of objects or materials are valuable; in biology, field trips for the purpose of observing and studying animals and plants in their natural habitat are important; maps and globes assist in the formation of accurate concepts of the relationships of places.
2. *The relative effectiveness of the available types of aids.* A considerable amount of educational research has been devoted to the relative values of different types of visual aids. The evidence is clear that different types of aids serve different purposes. In many instances the decision in regard to what aid to use is not in terms of the relative superiority of one aid over another, but rather of what combination of aids is the most desirable.
3. *Proper balance and variety of aids.* Not all types of visual aids are equally effective in different types of classroom activities. For example, stereograph views are well adapted for individual pupil study, whereas projected pictures are appropriate for group activity. The interests of an individual pupil may be more adequately served by a variety of aids than by a single one. A model may arouse the interest of one pupil, while the dramatic quality of a film may make a strong appeal to another. The selection of aids should be made on an objective basis, thereby avoiding overemphasis upon those types which may have a particular fascination for the teacher or for a small number of the members of the class.
4. *The extent to which the type of aid is adaptable to the pupil's mental abilities.* Visual aids and other teaching materials appropriate for one group of students may appear to be "kid stuff" to another group.
5. *Availability and cost of aids and time required for presentation in the classroom.*

6. *If the visual aid has been used previously by the teacher, the evaluation he and his students have made of it* In an increasing number of schools, the expert opinion of the director of visual education is available to teachers.

3. USING PROJECTED PICTURES

Selection of Films.—A considerable amount of educational research has been devoted to the relative effectiveness of the various types of films. A much-debated issue in visual education circles has been that of the value of *sound* versus *silent* film. On the basis of the results of experimentation the sound film has its adherents, while the silent film advocates are equally enthusiastic. The fact is that the evidence is inconclusive in regard to the relative effectiveness of otherwise identical sound and silent films.

The really crucial issue involved in the selection of a film for classroom use is the purpose to be served by the film. Important considerations in the selection of films include the following:

1. Availability of the film (possibility of obtaining the film when needed)
2. Mechanical and technical quality of the film
3. Possibilities of correlating film with the topic being studied
4. Appropriateness of film to mental and social maturity of the pupils
5. Distinctive contribution to be made by the use of the film, e.g., motivation, providing information, culminating activity
6. Opportunities for follow-up procedures

Use of Films.—Proper utilization of films for classroom purposes is dependent upon an understanding of their role as *supplementary* teaching aids. They are not designed to replace books or the teacher. They cannot serve all the purposes of instruction. In fact, except in cases where an understanding of processes is involved, films may be inferior to other types of visual aids, such as film strips. Good teaching techniques based upon sound educational principles are as essential in the use of films as of any other type of instructional materials.

The effective use of films requires careful planning, not only in terms of the outcomes sought but also in regard to the proper facilities. The excessive and indiscriminate use of films hinders rather than promotes the learning process.

After the film has been selected upon the basis of the foregoing criteria, the teacher should plan a definite procedure for the teaching of the film. The following steps may be suggestive:

1. The teacher should preview the film for the purpose of becoming familiar with its content and organization.
2. The teacher should prepare a brief list of the main features of the films which are emphasized in the lesson.
3. The pupils should be given an assignment which includes:
 - a. Reading materials giving information in brief story form in regard to the general nature of the film.
 - b. If a sound film is used, a list of the unfamiliar words to study in order to understand the sound track.
 - c. A list of questions pertaining to the main points of information included in the film.
 - d. A list of suggestions to pupils in regard to what to look for in the film.
4. Have the class view the entire film without interruption.
5. Follow up the showing of the film with a class discussion of the main points presented in the film.
6. Have the class read textbook and supplementary materials related to the subject of the film.
7. Have individual pupils read and give reports to the class on special problems suggested by the film.
8. Show the film, stopping at any time to clarify questions raised by the class.
9. Give a test based upon the film, related readings, and class discussion.

Developing Motion Picture Appreciation.—One of the reasons for incorporating motion pictures in the curriculum is to give pupils a basis for intelligent evaluation and appreciation of them, as was suggested earlier in this chapter. Pupils can be guided in formulating a set of criteria for judging motion pictures and also in applying the criteria to pictures they see in commercial motion picture theaters. There follows a set of criteria ⁴ for judging motion pictures for use in schools:

- | | |
|-----------------------------|---|
| 1. Entertainment value | 7. Direction |
| 2. Basic theme | 8. Characterization (acting and speech) |
| 3. Story | 9. Settings, costumes, makeup, properties |
| 4. Appropriateness of title | 10. Sound and musical effects |
| 5. Dramatic plot structure | |
| 6. Social value | |

Film Strips.—Film strips are also known as slide films, film rolls, stereopticon films, and film slides. They are still pictures, printed on short strips of standard width, noninflammable motion picture film

⁴These headings are based upon a *Scholastic* scorecard for rating photo plays. Reprinted from *How to Judge Motion Pictures* by Sarah McLean Mullen. Copyright, 1936, by Scholastic Corporation.

and may be used in place of glass slides. They can be projected serially or singly, and forward or backward as desired. Both silent and sound types are available. They cost only a fraction as much as regular motion pictures and are convenient to handle. Another advantage is that a picture can be held on the screen for any length of time desired and pictures previously shown can be turned to. A disadvantage is that the pictures have to be shown in a predetermined order. The silent slide films possess great flexibility in teaching in that the teacher can emphasize certain pictures by explanations as they are held on the screen. The sound film strips which reproduce sound from disc records can be run without sound in the event the teacher wishes to supply the explanation or have the class discuss the picture. Since the slide films do not move, stronger impressions can be gained by closer attention to details than the moving film permits. The projection equipment is relatively simple and inexpensive.

Slides and Opaque Projections.—Glass slides of photographs and diagrams are well adapted to group instruction and small auditoriums. Both the slides and the necessary projection equipment are inexpensive. The equipment is relatively simple and easy to operate. In comparison with film strips, glass slides are more durable and less likely to be damaged by heat. Another advantage of slides is that it is not necessary to show them in any fixed sequences. The standard size ($3\frac{1}{4}'' \times 4''$) slide is large enough to give the picture the desired detail. However, many modern slide projectors now are made for $2'' \times 2''$ slides. A recent innovation is the synthetic-plastic slide. In many high school classes, students make their own slides.

Many slide projectors have an adjustment feature which makes it possible to show either slides or opaque materials. Regular opaque projectors are also available. By means of these projectors post-cards, materials from the pages of a textbook, or geology specimens can be shown on a screen. A dark room and a good screen are absolutely essential. Light-projected maps are also widely used. Proponents of these maps claim they have much greater teaching force than the traditional wall map, because they can be more easily seen and are easier to handle than a series of wall maps. Map slides in color are now available. Perhaps the most satisfactory slides are those prepared by experts in photographic work; however, many teachers add to their list of slides by having students assist in making them.

Like other visual aids, slides should be selected carefully for class-

room use. Among the criteria for selection are relevancy, technical quality, maturity of pupils, and contribution to the work at hand.

4. USING UNPROJECTED PICTURES

Flat Pictures.—Unprojected pictures are often referred to as “flat” pictures or merely as “pictures.” The various kinds of unprojected pictures include actual photographs, prints, paintings, murals, and illustrations in textbooks, magazines, and other publications. They can be obtained from photographers, school supply companies, and many other sources. From the standpoint of pupil interest, excellent sources are the pupil’s and teacher’s own collections. Flat pictures are inexpensive and abundant in variety and scope. They may be in color or black and white.

The unique value of this form of pictorial aid lies in its possibilities for detailed analysis and study. Mountains, other geographical features, and many constructed works lend themselves to more effective portrayal by still pictures than by motion pictures because of their natural immobility.

Use of Pictures in Teaching.—It is obvious that the first essential in the effective use of pictures is that each pupil be able to see the picture clearly and distinctly. Many teachers, however, fail to devise adequate methods of showing pictures. A single large picture may be utilized satisfactorily for group study. In the case of smaller pictures, it is desirable to provide a sufficient number of duplicate copies of each picture so that each pupil may have a copy for individual study. If duplicates are impossible to obtain, it will be necessary to rearrange the seating so that all may see a single picture or one of a limited number of pictures. A common error is to distribute a large number of more or less unrelated pictures to be passed along hurriedly from one pupil to another.

Better results are usually obtained if the members of a class concentrate on a few pictures during a given class period. When it is necessary to “pass pictures around” in the class, the pictures should be arranged in some logical sequence. The chief value of pictures of this type depends largely upon thorough analysis and study, which require time and involve guiding pupils in observing the various features of the picture. Individual and group discussion based on the objects and their relationships in the picture are often fruitful.

Pictures can be clipped from various types of publications and can be mounted very easily. Mounted pictures can be shown to greater

advantage and retained for future reference more easily than unmounted ones. When not in use, they should be filed according to subject and topic. Proper labeling for purposes of identification is also desirable.

Textbook Illustrations.—Many textbooks and supplementary reading materials are well illustrated. These illustrations can serve a useful purpose in contributing to the pupil's understanding and appreciation of a topic. The teacher can relate them to the reading material by directing attention to the meanings they convey. Investigations have revealed that unless this is done, children often fail to understand the full significance of pictures in books.

A few well-chosen pictures of artistic merit add to the attractiveness of classroom walls. They also may become the basis of or a supplement to classroom study. Pictorial bulletins, many in color, suitable for bulletin boards are available from commercial organizations. Many current bulletins pertain to historical, scientific, or industrial themes. As is true of other bulletin board materials, only a few should be displayed at any one time, and they should be changed from time to time.

Many state libraries have a variety of pictorial materials available for use in schools, which can be obtained on a free rental basis except for transportation costs. These materials, particularly valuable for the study of state geography and history, consist of mounted pictures, books, and periodicals containing pictures, magazine and newspaper clippings, and photographs of pictorial materials too valuable to be lent.

The postage stamp collection has great educational significance in these days of increased attention to world geography and foreign countries. The stamps of many countries have considerable artistic merit, but it is in the fields of geography, history, and international relations rather than art that postage stamp collections have their greatest value. The late President Roosevelt referred to stamp-collecting as the "science of human relationships." Many issues of United States stamps have commemorated significant historical events and the achievements of leaders in art, education, music, science and government. Stamps of foreign countries depict the geographical features, products, history, and peoples of those countries. Stamp collecting in school often becomes the basis of a life-long hobby.

Stereograph.—The stereograph is a twin picture giving the illusion of three dimensions. It is produced by a bifocal camera or two cameras arranged at different angles. The lenses of the stereoscope, through

which one looks at stereographs, magnify and merge the two pictures into a single image. The sense of realism engendered by the stereograph makes it a particularly valuable visual aid in the teaching of geography and solid geometry. It is not designed for group instruction but rather for individual study. There are two types of stereoscopes. One type is the hand stereoscope, which is quite inexpensive and does not require the use of electricity. Sets of stereoscopes sufficient for many pupils may be purchased at a reasonable cost. The other type is known as the telebinocular. It is electrically equipped and shows the details of the picture very clearly and vividly.

5. USING GRAPHIC MATERIALS

Graphic materials depict ideas by emphasizing certain elements in a situation and subordinating others. They are not designed to reveal details as other types of visual aids do. In this respect they are the most abstract of all visual materials. They arrest the attention by exaggeration or unusual arrangement of line and color. Their power lies in their ability to convey meanings dramatically and instantaneously. Their direct and forthright treatment and their simplicity of form enable them to portray an idea of light humor or one of great social significance.

Cartoons and Posters.—The degree of interest which can be developed in commonplace objects or events by graphical representation is disclosed by the popularity of the newspaper comic strips. Recently an effort has been made to capitalize for educational purposes on the appeal that comics make to children. A series of cartoon books designed to teach history, science, and religious subjects is in the process of publication. The artistic quality and potential interest value appear to be satisfactory.

The comics, however, represent only one of several forms of cartoons. Magazines, newspapers, and books contain many cartoons of considerable political and social significance. These offer many possibilities for supplementing numerous areas of the school curriculum.

The quick initial impression which a good cartoon makes may be superficial and fleeting unless it is accompanied by further reflection. Students can be guided in their study of cartoons by discussions which assist them to understand the symbolism and to interpret the meanings. A comparison of cartoons representing different points of view may serve to stimulate an interest in reading leading to the development of an unbiased interpretation of the issue or subject depicted.

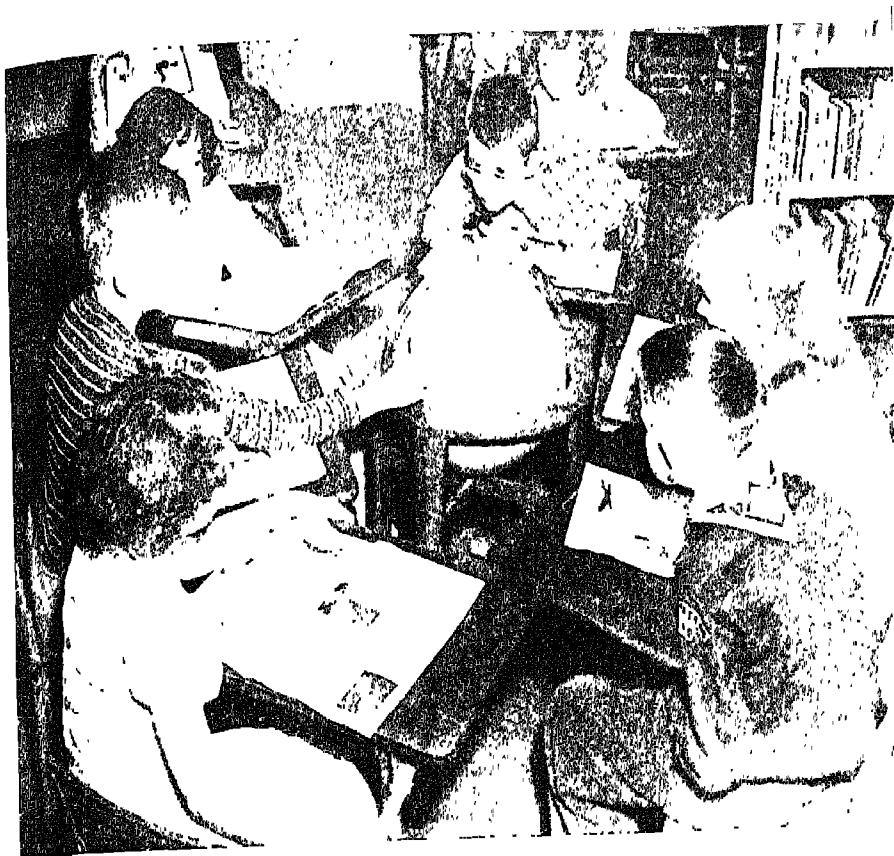
By line, composition, or color, the poster emphasizes one dominant theme. It is designed to convey one idea directly and forcefully. The strong impression it makes may be utilized to impart information, to develop attitudes, or to disseminate propaganda. An analysis of posters, such as those in the series by Rockwell Kent on the "Four Freedoms," can serve to open new vistas to the study of many economic and social problems.

As one of the culminating activities of a unit of instruction, students may summarize attitudes and knowledge they have acquired in the study of the topic by designing and making posters. Thus training in techniques of drawing and in the use of color and other materials is provided in a purposeful situation

Maps and Globes.—The function of the map is to give a graphic representation of the abstract concepts of distance, direction, location, and size. Maps were among the first types of visual aids to be used in schools. Recent developments in the preparation of maps have made them much more useful in teaching than they formerly were. In comparison with the older types, the newer maps give a far more accurate representation of the relative positions of places on the earth. For example, the new "air-age" maps with the North Pole in the center show the land masses of the Northern Hemisphere grouped about the Arctic Ocean in their proper perspective. While the land masses south of the equator are somewhat distorted, these maps enable the student to form accurate concepts of air-line distances, as well as the physical, economic, and political relationships of countries in the Northern Hemisphere which are significant in the air age.

The subject matter depicted in maps nowadays is also much wider in scope and variety than it was a generation ago. An examination of the kinds of maps available at present indicates that practically every aspect of knowledge comes within the scope of the map maker. On the basis of form, maps may be classified as globes, relief maps, and flat maps. An understanding of the wide range of topics which are encompassed by maps can be gained by attempting to classify flat maps according to content. The types of flat maps now available include air-line maps, current events maps, political maps, political-physical maps, product maps, rainfall maps, temperature maps, soil maps, vegetation maps, military maps, literary maps, population maps—some showing location by nationality, religion, or institutions, road maps, and many more.

The mechanical features of maps for school purposes have been greatly improved in the last generation. More consideration is given



A fourth grade group working with visual aids and supplementary reading materials.
(Boulder, Colorado, Public Schools)

to proper arrangement and balance of materials. Color is used more effectively, and useless detail is omitted. Maps should be selected with reference to the maturity of pupils, purposes to be served, and the type of learning activities involved. For example, in group instruction large or projected maps are necessary. If individual study of maps appears desirable, smaller maps for individual use should be available. If pupil activity in the making of maps appears feasible, desk outline maps should be obtained.

Use of Maps in Teaching.—The effective use of maps as visual aids is more dependent upon classroom arrangement and other routine matters than is true of most instructional materials. As part of the preparation for teaching a topic with the aid of maps, the teacher should examine the available maps pertinent to the topic, select the types and sizes best suited to her purposes, and arrange the maps in advance for optimum use.

One purpose of the study of maps in schools is to teach pupils to use them effectively in their own study. It is no compliment to elementary and high schools that students come to college without a knowledge of directions as indicated on maps. The following list of suggestions for utilizing maps as visual aids has been adapted from McKown and Roberts:⁵

1. Be sure that the pupil comprehends the purpose of the map—what it is for, why it is necessary, and how it is used to provide information about the activities of man, including the pupil himself.

2. Promote the development of a favorable emotional set. This can be achieved by assisting the student in finding the answers to his or the teacher's questions. Simple maps which are easy to interpret and understand should be used in the early stages of map study.

3. Allow ample time for the pupil's first "looks." Permit him to survey the whole map before he concentrates on the different elements which comprise it.

4. Be sure that the pupil understands map symbolism. This involves an understanding of the conventional symbols for land, water, elevations, the equator, parallels, meridians, etc. It is equally important that he be able to visualize the meanings back of the symbols. Other visual aids, such as pictures, films, and stereographs, properly correlated with maps, help the student in visualizing the symbols.

5. Use maps at the opportune time. Maps should be used only in meaningful situations when needed to answer questions, solve problems, or supply information. Maps should not be taught apart, but rather as an integral part of the work in a subject.

⁵ From *Audio-Visual Aids to Instruction* by Harry C. McKown and Alvin B. Roberts, 1940. Courtesy of McGraw-Hill Book Co., Inc., pp. 85-87

6. USING OBJECTS, MODELS, AND SPECIMENS

The study of objects in their natural surroundings provides the best basis for understanding of their functions and relationships to other objects. It is obvious, however, that all objects included in the curriculum cannot be studied in their native habitat. Children can be afforded firsthand experience with many objects by bringing them into the school. When they are studied against the pupils' background of experience with similar objects, they become an important aid to learning. The dual approach to learning—by sight and by touch—which is provided by this type of visual aid adds meaning and realism to school work.

Models.—Models which are representations (not reproductions) of objects have certain distinct values. A model may represent in miniature an object which is too large for complete study. For example, more significant relationships can be revealed by studying a model of the earth than by scanning the horizon. On the other hand, a model may be made much larger than the actual object and so permit more detailed study. In using models in teaching, the teacher should be certain that students obtain a clear understanding of the relative sizes of model and object.

Working models with moving parts are of great value in developing understanding of mechanical devices. The dynamic quality which motion gives to models is well illustrated by the exhibits in the New York Museum of Science and Industry in New York City. Museums would be more interesting to adults and children alike if they contained fewer stuffed elephants and more animated objects.

Specimens.—Objects can be arranged to reveal certain relationships in an effective manner. For example, relics of the American Indian can be grouped in the chronological order of their origin and use. By combining paintings and models or objects, the diorama creates realistic impressions. The realism of a foreign coin collection arouses interest and motivates children's study far better than a series of drawings and verbal descriptions of the objects. Newspapers or reprints published on the dates of significant historical events are effective in giving children a sense of reality in regard to the events.

Use of Models and Specimens.—The construction of models by pupils presents excellent opportunities for creative, meaningful work. Specimens suitable for use in science classes can be collected, mounted, and labeled by the pupils. Many objects which enrich and vitalize

teaching in various subjects can be obtained free or borrowed from people in the local community. Commercially made models are also available at a nominal cost.

In using materials of this type as teaching aids, the teacher should be certain that the aids are relevant to the topic and that they can be closely correlated with other instructional materials. The novelty of an aid may arouse initial general interest. It should do more. The attention of the class should be focused on the aspects of the object which bear a direct relationship to the study topic. The possibilities of relating these aids to other activities in connection with a subject include further reading about the object, writing reports on it, making diagrams or drawings of it, and individual and group discussions based upon it.

Many objects, models, and specimens collected for class use have permanent values. They can be used time and again if properly preserved and stored. The objects collected by a class might well become the nucleus of a school museum.

7. VALUES, TYPES, AND USE OF AUDIO AIDS

Until recently the number of practical auditory aids available for use in the classroom has been very limited. The phonograph has been the chief supplementary teaching aid which makes its appeal to the auditory sense. For many years after the invention of the radio, technical difficulties as well as teachers' lack of awareness of its instructional possibilities hindered its acceptance as a classroom teaching aid.

Recent scientific progress has eliminated many of the technical obstacles. The effectiveness of the radio in calculating ideas and developing attitudes of persons outside the school has been amply demonstrated. Still another cause of the increased interest in radio as an aid in teaching has been recognition of the fact that radio listening has become an important leisure-time activity of youth. As a result of these developments, teachers have given consideration to two questions, namely :

1. How can teachers assist pupils in making their leisure-time radio listening more beneficial?
2. How can audio aids, including the radio, serve to reinforce classroom instruction in achieving the desired outcomes of education?

Faced with the challenge inherent in these two questions, teachers have employed various forms of audio aids to supplement their classroom instruction. At present audio aids have taken their place beside

the textbook and supplementary reading materials as an integral part of the course of study. Chief among these aids are:

- Public address systems and sound amplifiers
- The radio
- Phonographs
- Sound recording equipment—play-back devices
- Sound pictures

The Radio.—The only justification for using a particular teaching aid is that it possesses, singly or in combination with other aids, certain unique values. In other words, its use must contribute more effectively to a process or an outcome than does any other available medium. The potential value of radio as an instrumentality of teaching is tremendous; its actual significance is dependent upon the manner in which it is utilized in the attainment of worthy educational objectives. The chief general values of radio as a teaching medium are discussed in the following paragraphs.

Radio can motivate pupils The radio program possesses several characteristics which are significant for purposes of pupil motivation. One of the most important is *timeliness*. Radio broadcasts of important events tend to eliminate feelings of remoteness which pupils attach to many topics presented in the classroom. One of the difficulties teachers encounter in motivating pupils in their study is the haze of unreality surrounding many classroom activities. A great deal of our teaching has been in terms of "long ago and far away." Firsthand accounts of significant happenings have a touch of reality which makes a strong appeal to children. Interests aroused by the broadcasts can be used as a point of departure for further study and reading on the broadcast topic, as well as related topics. Another motivating factor is that the radio *eliminates barriers of space*, bringing the world to the classroom. Broadcasts of significant current events taking place in the United States and elsewhere help to create real, lifelike classroom situations. Great personalities from every walk of life share their knowledge and enthusiasm with pupils in the schoolroom. Descriptions of historical events, forums, and the discussions of challenging problems by authorities serve to stimulate and inspire pupils.

Radio can invigorate knowledge. The greatest contribution of radio to education lies in the inherent dramatic power of the spoken word. It can give vital meaning to instructional materials which otherwise may appear abstract and impersonal. Radio broadcasts,

therefore, may serve to provide students with vicarious experiences having much of the force of actual experience. Authentic information, presented by well-informed radio speakers, also supplements knowledge obtained by pupils from books and other sources. As an integral part of the course of study, the radio is one of the determiners of the pupils' school experiences.

Radio can establish standards in language usage. The standards of diction and pronunciation set by most radio speakers are worthy models for pupils. The extent to which faulty diction, careless pronunciation, and other errors in language hinder effective presentation of ideas on the radio becomes apparent to the children. This awareness of the significance of correct language usage becomes a motivating force for improvement of their own standards of speech.

Radio can develop and increase worthy interests. New interests in drama and music may grow out of guided radio listening in the classroom. Until the advent of radio, good musical programs and theatrical performances were not available to most of our children. If given the opportunity to hear and the ability to interpret good music, many pupils may develop noteworthy recreational or vocational interests. Dramatizations of good books may lead to more extensive reading of significant material by children. The radio may also enable pupils to pursue worth-while interests which have their origins in other situations.

Radio can create desirable attitudes. World-mindedness should characterize the good citizen of the present and the future. Basic to this attitude is an understanding of the different peoples of the earth. By means of the radio, the elementary school pupil can acquire a knowledge of the characteristics, needs, and aspirations of the inhabitants of other countries. A sensitivity to the problems of human beings in our own country can be heightened by radio discussions of domestic, social, and economic issues.

Sources of Radio Programs.—There are several means by which radio programs may be made available in the classroom. In considering the advisability of utilizing one or more of the different facilities, the committee on audio aids should consider not only comparative costs but relative advantages. The chief types of facilities are commercial broadcasting stations, school-owned broadcasting stations, and rented telephone wires.

1. *Commercial Broadcasting Stations.* The use of this facility requires equipping the school with receiving sets in each classroom,

or a central receiving system with outlets in the various rooms through which regular radio programs are received. Schools with limited funds have made fairly effective use of the radio by shifting a single receiving set from one classroom to another as needed. The school may also purchase radio time for the purpose of giving broadcasts by students or school authorities. In many communities, schools have been able to obtain radio time gratis or at a nominal rate as a feature of the commercial station's public service program.

Schools have not utilized the radio as fully as have other agencies. There are several reasons why classroom teachers have failed to take full advantage of commercial radio as a supplement to their teaching.

One of the difficulties has been that of adjusting the time of the broadcast to class schedules. The differences in the standard time zones are partly responsible for this problem. Some radio programs are now being broadcast at different times for the different zones. Recording devices and equipment for playing back programs to classes whenever desired serve to overcome this obstacle. With the advent of school-owned frequency modulation broadcasting stations, teachers will be able to use programs at times when they will best serve the purposes of classroom instruction.

Another objection to the use of commercial radio programs has been the limited number designed for juvenile listeners. Formerly programs for children were characterized by a tone of excitement and a flair for the sensational. The charge was frequently made that the general quality of many children's programs was low and in some cases vulgar. Broadcasters have begun to recognize the evils inherent in this type of program, with the result that the number of them is decreasing.

The authors are of the opinion that a third limitation is the amount and degree of misleading information in the form of advertising, and of statements of news commentators on questions of public interest.

Another handicap under which teachers have worked in their efforts to use programs of commercial stations has been their inability to obtain specific, detailed information about the program in advance. Listener's guides and teacher's manuals are now being provided for several programs by the broadcasting companies or sponsors.

Finally, adequate radio reception equipment has not been available in many schools. As awareness of the educational values of radio increases, school boards will incorporate costs for equipping and maintaining radios in school budgets. Many of the items of radio reception equipment are now more moderately priced than in the past.

2. *School-owned Broadcasting Stations* Several of the larger school systems own broadcasting stations. Under this plan a school system acquires and operates its own transmitter and other necessary equipment. A license from the federal government is required to operate this type of station. It is necessary also to employ skilled and licensed operators. Programs to the schools are transmitted directly to an antenna in a school and then relayed to the classrooms, or the program may be transmitted to separate antennae for each classroom. If a radio studio is owned by the school, its equipment may be used for instructional purposes in science classes. The students install, maintain, and operate radio stations in many schools. The studio may also be useful for auditions of student announcers, vocalists, and instrumentalists.

Phonograph Records and Transcriptions.—The equipment consists of a phonograph in each room where these aids are to be used. Light portable phonographs are used in some schools. The records and transcripts may be kept as separate record libraries in each school, or a central library may be maintained for the entire school system.

The phonograph is the most adaptable of all the audio aids for classroom use. A record can be played as many times as necessary to insure proper understanding and appreciation. Records of the best in music, literature and English language are available at a nominal price. Phonographs with three speeds, operating at $33\frac{1}{3}$, 45, or 78 revolutions per minute, can be used to play both ordinary records and radio transcriptions. Transcriptions of many programs can be obtained from local broadcasting stations.

The teacher should listen to all the records to ascertain their suitability and to discover cues for their use before they are played for the class. Records should be selected in terms of specific objectives. In one instance the purpose may be analysis of form and content. In another case the record may be played for mere enjoyment or to give local color to a subject. A sense of reality is fostered by the use of recordings of the voice of a poet reading his own poetry, such as those made by Vachel Lindsay. Records made by dramatic readers of important selections from literature are also available to schools.

Many schools maintain a central record library, which has the advantage of making the records more readily available to all teachers as well as providing a safe place for filing. Unless records are stored properly, they may become warped or broken. Even the new non-breakable plastic records are subject to warping unless they are carefully protected when not in use.

Phonograph records can be more satisfactorily stored by an experienced librarian than by classroom teachers. Separate sound-proof booths in the school library can be provided where pupils may listen to records. The booths may be fitted with glass doors, making it possible for the librarian to supervise the students' activities.

The Use of Phonograph Records.—As an integrated classroom teaching aid, the phonograph record can serve to arouse pupil interest, illuminate and interpret what is read, and stimulate good reading and speaking habits. The following suggestions for the use of phonograph records apply particularly to the teaching of English literature, in this case a play, but the same plan may be followed in using phonograph records in other subjects.

1. Preparatory work of the teacher :
 - a. Listen to the record in order to familiarize yourself with its content and organization.
 - b. Prepare a brief outline of the main points to be emphasized in the lesson.
2. Preparing the pupils for hearing the record :
 - a. Have the pupils read the printed text of the play, with particular emphasis on the scenes included in the record.
 - b. Hold a general discussion of the play in which you or one of your pupils gives an overview of the story of the play.
 - c. Have pupils read aloud the parts of the play presented on the record.
 - d. Suggest to the class before playing the record that they give particular attention to the inflections, pronunciation, and dramatic qualities of the voices recorded.
3. Play the record through the first time without interruption.
4. Follow-up work :
 - a. Have the students discuss the main points of the recorded version of the play.
 - b. Give pupils questions to answer in regard to the main characters, plot, and action of the play as revealed by the recording.
 - c. Ask pupils to mention and repeat selections or sentences of outstanding beauty or importance.
 - d. Have pupils dramatize some of the most important scenes in the play. In the original dramatizations encourage pupils to make an effort to rival the recorded dramatization.
 - e. Have pupils prepare written character sketches of the leading roles in the play.
 - f. Play the record again, stopping it at any time to clarify questions raised by the class.

Selection of Programs.—From the vast number of commercial radio programs available, a careful selection should be made of those programs which are most appropriate for classroom use. In many schools a radio committee consisting of classroom teachers obtains information in advance and recommends to the faculty the use of certain programs. If the members of the committee understand the educational possibilities of radio, and especially if they have among their members a radio enthusiast, they can render an important service to the teachers in school in advising on the selection of radio programs for classroom purposes.

In the event the teacher has the responsibility of selecting programs for her classes, she may not be able to obtain information in advance in regard to every radio broadcast. However, for many radio programs, teacher's manuals and study guides are available from the broadcasting company or the sponsor of the program. The major broadcasting companies will send schedules of programs upon request from the teacher. Information about various programs can likewise be obtained from the local broadcasting station. Radio magazines and bulletins also may be used as sources of information. The main factors which should be taken into consideration in selecting radio programs for classroom use are as follows:

1. *Are the purposes of the program in keeping with the objectives of the unit or course?* In an English class in which correct pronunciation or good diction is one of the outcomes, the ability of the speaker or actors in these matters is important. If appreciation of drama or music is one of the outcomes sought, the nature of the production and the quality of the performance are essential criteria for selection.
2. *Is the program relevant to the immediate learning activities of the class?* If the class is in the initial stages of the study of a topic, the chief value of the program may be that of motivation. In the study stage of the topic on which students are assembling information, a radio program which presents factual material pertaining to the topic is desirable. In the culminating stages of the study of a topic, the radio program may serve as a climax to the student's activities.
3. *Are the content and the manner of presentation such as will appeal to the interests of the class?* The vocabulary and style of the presentation should be adapted to the abilities of the students. The character of the material should be such that it can be adapted to effective presentation on the radio. The presentation of the program should meet a high standard of excellence. The use of maps and supplementary reading materials and the study of un-

familiar words in the broadcast are effective methods of adapting the program to the abilities of students.

4. Is the length of the program appropriate? The age and maturity of pupils are important considerations in making this decision. If the broadcast is too long in terms of the attention span of the class, many of the important values of the program will be lost. The length of the program in relation to the length of the class period also should be considered. In many instances the optimum value of a radio program can be attained only when it is followed by a discussion in which the pupils and the teacher participate.
5. Is the time of the broadcast suitable? Except in the case of a spot program of considerable current significance, radio programs should be selected which will not interrupt the daily schedule too seriously. However, the value of the program, rather than its adjustment to a fixed schedule, should be the determining factor in regard to the use of a broadcast in the classroom. In this connection schools encounter one of their main difficulties in the use of commercial station broadcasts. The recording of radio programs for rebroadcast at more appropriate times is one solution to this problem. School-owned broadcasting stations can plan their programs to fit the instructional schedule of the different classes and schools, or they may repeat certain programs.

Preparation of the Class for the Broadcast.—The amount and kind of preparation depend upon the purpose and type of the broadcast. If the program is selected well in advance of the actual broadcast, the teacher may give a preview of the topic in the form of a discussion in which dramatic episodes related to the subject are included to arouse pupil interest. Sufficient information should be given in the presentation to provide pupils with enough of the background of the program to enable them to appreciate it. It may be advisable for the children to engage in some prebroadcast study of the topic. If, for example, the radio program is about the people of some foreign country, an assignment might be given which would involve:

1. Preparation of a list of books on the country by a committee of the class
2. Class study of a map of the country
3. Study of the meanings of words which are peculiar to the country
4. Study of pictures of the country
5. Brief reports by individual pupils on different aspects of life in the country

Assignments for Out-of-School Broadcasts.—In the event the pupils are expected to listen to radio broadcasts during out-of-school hours, assignment should be as clear and definite as that of any other lesson. (For discussion of the characteristics of an effective assignment, see Chapter 8.)

An assignment based upon a radio program should make provision for :

- 1 Proper motivation through relation of the program to the pupils' past experiences, telling interesting incidents, etc.
- 2 Definite information in regard to the time of the broadcast and the name of the station broadcasting the program
3. Sufficient basis for understanding the program: information in regard to the characters or speakers, something about the play or musical composition, etc.
- 4 Clear understanding of why the pupil should listen to the program
5. A knowledge of what post-broadcast activities will be expected by the teacher, e.g., class discussion, individual reports, tests, etc.

Activities During the Broadcast.—It is essential that the physical environment be conducive to effective listening. In most instances the schoolroom is the most desirable place for pupils to hear radio programs. Assembling a large number of children in a school auditorium is not a satisfactory arrangement for hearing most radio programs. The receiving equipment should be adjusted for maximum clarity and tonal quality. Distractions of all kinds should be reduced to the minimum.

Any reference materials to be used in connection with the broadcast should be readily available. The pupils may be expected to make brief notes of items for further study or discussion, or if the teacher feels that note-taking distracts the attention of children from the program, he may wish to make brief notations, of topics for later consideration by the class. In some types of broadcasts, the use of maps and pictures during the program may be desirable. In teaching music by radio the use of the score when listening to a selection of music is often helpful. The selection may also be repeated on a phonograph record for further analysis and study.

Post-Broadcast Activities.—The maximum benefits from most radio programs can best be achieved by follow-up activities related to the broadcasts. Dependent upon the type of program and its contribution to the specific objectives of the course, the follow-up procedures may take one or more of the following forms :

1. Class discussions of challenging problems suggested by the broadcast
2. Club activities stimulated by the program
3. Experiments following up a broadcast
4. Slides or films related to the broadcast
5. Reports by individual pupils to the class on topics related to the broadcast
6. Reading of books stimulated by the program
7. Test of basic understandings, information, and terminology

Pupil Evaluation of Radio Programs.—Critical and intelligent radio listening, both in and out of school, should be one of the outcomes of the use of the radio in school. Children should be guided in formulating a set of criteria for judging radio broadcasts. Class discussions of some of the programs in terms of the criteria are held in many schools. Some of the matters which may serve as a basis of the discussion are :

1. Objectionable advertising
2. Propaganda
3. Undesirable emotional appeal
4. Aesthetic value
5. Reliable and unprejudiced source of information
6. Craftsmanship in music, acting, speech, and synchronization

Pupil Participation in Radio Broadcasts.—Participation by pupils in the production of programs for broadcasting over the local commercial or school-owned station may have several valuable results. Chief among them are that it :

1. Provides pupil motivation for creative work in preparing and presenting programs
2. Gives children a keener insight into the mechanics of writing and producing radio scripts
3. Develops functional usage in speech and writing through acquaintance with the techniques of radio writing and presentation
4. Constitutes an effective type of school publicity which affords the school an opportunity to render service to the community through the promotion of worthy community enterprises

Use of Sound Recording Equipment.—Recent technical developments have made recording devices practicable for school purposes. By means of the magnetic tape recorder, inexpensive direct recordings can be made, played back for study, and then erased, after which new recordings may be made on the same tape. Other equipment is available for recordings of a more permanent form.

Schools utilize these recordings in a variety of ways. In some schools, radio programs are recorded for later use. Teachers of music make recordings of the solo and group singing of their pupils and play them back to the children for analysis and study. Instrumental music work lends itself to similar treatment. The distorted impression which a child may get of the contribution made by his own voice or instrument in group singing or playing can be corrected by listening to the recorded version, and the class can make an objective diagnosis of their rendition of a musical composition. Teachers of speech have found recordings valuable for the diagnosis of students' speech defects. In many schools dramatic productions and programs of special local interest are recorded for their historical value.

Guiding Pupils in Out-of-School Radio Listening.—Teachers are becoming increasingly aware of the power of the radio to influence the lives of individuals. The fact is generally accepted that the radio has become a great social force. Will it become an instrument in aiding man to achieve the good life or just another device for "pushing him around" by telling him what to think and what to buy, as well as whom to follow, whom to hate, and whom to fight? The answer to this question depends to some extent upon the ability of the millions of listeners to become discriminating, intelligent listeners.

There is little gained from a teacher's merely condemning the programs to which pupils listen. She should be in a position to suggest more desirable programs. Any such recommendation, however, should be based upon an understanding of individual pupil's interests and tastes. Assignments can be made occasionally directing pupils to listen to significant radio programs at home and be prepared to discuss them in class.

QUESTIONS, PROBLEMS, AND EXERCISES

1. How may elementary school pupils be taught to evaluate and appreciate good motion pictures?
2. Make a list of the abilities and skills elementary school pupils should acquire in the use of maps. Outline in some detail a plan of teaching designed to assist a class in the acquisition of four of the skills on your list.
3. Suggest methods of evaluating the outcomes of learning achieved by the use of a motion picture in classroom instruction.
4. Make a collection of cartoons from current magazines and newspapers for use in teaching an elementary school class.
5. List some objects, models, or specimens which might be used effec-

tively in teaching one of your classes. From what sources could each of the items on your list be obtained?

6. Using the criteria suggested in this chapter for evaluating pictures, select pictorial materials for use in teaching an elementary school class.
7. What are the chief values of and limitations on the use of radio in teaching?
8. Why is the classroom better adapted to radio listening than the school auditorium?
9. How can the teacher promote discrimination in listening to radio programs on the part of elementary school pupils?
10. List the main advantages in the use of phonograph records in comparison with radio programs.

Chapter 17

UTILIZING COMMUNITY RESOURCES FOR LEARNING

The child's school experiences and learnings constitute only a part of his total education. The significance of school experiences for the child is determined in no small degree by the teacher's ability to unify the stimuli to learning which the pupil encounters in the various areas of his social and natural environment. If properly integrated, the learnings which occur in school and life supplement and reinforce each other. If on the other hand they are permitted to remain unrelated and isolated, the learnings in the different situations may stand in opposition to the full development of the individual.

An individual's intellectual interpretation of the printed page is largely in terms of his past and present experiences with various social groups in the communities in which he has lived. The impact of environmental conditions upon his attitudes and overt behavior is clearly discernible. Likewise his physical well-being is dependent in large measure upon environmental factors. These realities of his existence cannot be ignored in any educational program designed to contribute to his full development.

An individual's school experiences have meaning and significance to the extent that they are blended and fused into a unified experience. The community provides a considerable portion of a child's firsthand experiential background and gives meaning to his vicarious experiences. It is essential to interpret a pupil's behavior and reactions against a background of community life.

The school's acceptance of greater responsibility for all aspects of a pupil's development and growth has made it imperative that the teacher understand and utilize the varied educational resources of the community in which the child lives. Never before in history has the individual been influenced as greatly by the larger state, national, and world communities as he is today. The impact of many of these conditions, however, can best be understood by relating them to conditions in one's immediate environment.

In every community, however small, numerous social processes are in operation. The community is the basic unit in the performance of many of the major social functions of life, such as making a living,

securing an education, engaging in recreational activities, and pursuing religious interests. A firsthand study of the problems arising out of these processes in the community gives the child an insight into other social needs. In seeking to achieve this social objective of the school it is imperative that our culture and its fundamental structure and problems become increasingly the integrating element of the curriculum.

1. EDUCATIONAL VALUES OF COMMUNITY STUDY

Since the community represents a significant aspect of the elementary school pupil's total environment, it appears that the appropriate point of departure for the study of our society is the significant problems of the child's immediate social environment. The values of relating the program of the school to the community may be briefly summarized as follows :

1. Reading readiness may be developed in the first grade by use of signs in and near school, e.g., "Exit," "Keep Door Closed," "Keep Away, Trucks Unloading," etc.
2. The interests of the pupil in his immediate environment can be utilized to make school learning more meaningful to him.
3. Community study serves to vitalize and enrich the child's school experiences by practical application to actual situations.
4. Community study contributes to the realization of one of the school's major responsibilities, namely, that of introducing children to the life of their communities.
5. Community study contributes to habits of observation in children
6. Community study develops pupil's appreciation and understanding of the social services of his community.
7. Community study counteracts isolation of the school from the realities of life, thereby enabling it to become a more effective agency of human welfare.
8. Study of community problems may become the antecedent for subsequent action to improve the quality of community life
9. Community study provides opportunities for children to participate in socially useful, cooperative group endeavors.
10. Community study fosters cooperation of individuals and agencies interested in making community life more wholesome.

Obviously the realization of these values is dependent upon intelligent selection and utilization of community resources. Students of curriculum construction, seeking to reduce the social lag of education, have incorporated instructional materials pertaining to the community into various courses. Some curriculum committees have accepted the

point of view that "the community is the curriculum." More conservative leaders in curriculum reconstruction, aware not only of the unique characteristics of each community but also of the *common factors of living in all communities*, have urged the adaptation of curricular materials to local community conditions. In the utilization of community resources and in student participation in community affairs it is essential that a proper balance be maintained with other educative activities.

The Community as an Educational Laboratory.—The utilization of the community as an educational laboratory is also in accord with principles of teaching which are basic to effective teaching procedures. A useful summary of the relationship between the principles of successful teaching and community-centered education is given by Olsen ¹ as follows:

HOW TEACHING PRINCIPLES ARE UTILIZED IN COMMUNITY-CENTERED EDUCATION

Basic Principles of Successful Teaching at Any Academic Level

How Community-Centered Programs Utilize These Principles

I

Educate the whole child. The child is not just a mind to be instructed: he is a physically, socially, emotionally, ethically, and intellectually growing person. If his powers are to develop in proper harmony, he needs learning activities which challenge his emerging interests and abilities in all the areas of his growth.

Integrated learning occurs. Well-planned community study projects necessarily involve not only intellectual understanding but, simultaneously, social poise, emotional control, physical activity, aesthetic response, and bodily skills. Pupils who explore a tenement house or a coal mine, for instance, develop all these aspects of the personality in unconscious integration.

II

Keep the program informal, flexible, and democratic. Children are restless and need confidence in their own powers and achievements. They therefore need every chance to ask questions freely, confer with other children informally, share in planning

Informality, flexibility, and democracy are essentials of any program. Interviews, excursions, surveys, service projects, camping, work experiences, and extended field studies cannot be standardized from pupil to pupil, from class to class, or from

¹ Edward G. Olsen and Others, *School and Community*, New York, Prentice-Hall, Inc., 1945, pp. 32-34.

their individual and group activities, carry personal responsibility for group projects, and help to judge critically the results of their efforts. This requires that the entire classroom atmosphere be friendly and democratic as well as informal and flexible, and that children not be held in unfair competition with standards of performance beyond their possible ability to achieve.

year to year. Every child who participates can discover facts and report findings valuable to the group and hence build confidence in himself as he knowingly contributes to the advancement of the project. Group planning, shared responsibility, and mutual evaluation are possible in the highest degree.

III

Capitalize upon present pupil interests. It is of utmost importance that the teacher first discover what interests and purposes his students already have, and then use these drives as springboards to further desirable learning. Thus, limited interests may develop into wider interests, undesirable purposes into praiseworthy purposes, and the child's educational growth be best promoted.

Every child is interested in his own community. He may not be much concerned with irregular verbs or with the life cycle of *Bacillus typhosus*, but he is considerably interested in telling friends about his next-door playmate who is ill with typhoid fever. Beginning with these immediate interests, it is not hard for the alert teacher to stimulate class concern about the fact that the city does not inspect the milk supply, and that well-written letters of protest might be sent to the health commissioner and to the editor of the local newspaper.

IV

Let motivation be intrinsic. Most learners find few desirable incentives in the traditional system of school marks, honors, and penalties. Their most moving incentives are those of real life itself: to explore the new and the interesting, to associate actively with other people, to manipulate and construct things, to compare opinions about matters which seem important, and to express one's self artistically.

The keynote is—"Let's find out!" Let's find out where that frog lives . . . what a police reporter does . . . how to interview an employer. Life-centered projects such as these, which actually develop out of students' interests, concerns, and needs, require little artificial stimulation for their initiation and development. The operating incentives are those which are natural in people's lives and fundamental in their interests; they are definitely not artificial or academic.

V

Make learning experiences vivid and direct. Generalizations will be mere verbalisms unless they are based upon meaningful personal experiences. That is why children need constant opportunity for motion pictures, radio programs, excursions, interviews, service projects, work experience, and the like. Through such media the children receive more concrete, interesting, and meaningful educational experiences than they are likely to receive through the printed page alone.

Firsthand contact is ultimate realism. "We read about slum housing in our textbook," remarked one student as she stood in the back yard of a legally condemned but still-occupied tenement, "but I never believed anything could be as bad as this! Why doesn't somebody do something about it?" Pupils who thus experience slum housing, or who watch a plasterer at work, or who visit the morgue to see what a drunken driver can do to himself are learning vivid lessons they will doubtless never forget.

VI

Stress problem solving, the basis of functional learning. Real education comes about when children intelligently attack real problems, think them through, and then do something to solve them. Every chance should therefore be given for pupils to discover, define, attack, solve, and interpret both personal and social problems within the limitations of their own present abilities, interests, and needs.

Real life abounds in problems. These problems may be vast or trivial, personal or social, intimate or remote, but all of them are important to some persons in some degree. Pupils who visit a public health clinic to learn the truth about the symptoms, detection, and treatment of tuberculosis are gaining valuable experience in problem solving; so also are those who climb to the roof to visualize better the local village's transit development.

VII

Provide for the achievement of lasting pupil satisfactions. Students who dislike their work learn little from it, and retain that little briefly. Every effort should therefore be made to maintain learning situations wherein children will achieve genuine success, find personal satisfaction therein, and thus grow intellectually, emotionally, socially.

Possible satisfactions are many and varied. Children who discover for themselves how an elevator works, who aid in constructing a health exhibit for the county fair, or who help a neighboring farmer terrace his hillside can experience deep emotional satisfaction as well as increased intellectual understanding. Such projects bring feelings of success; success is satisfying; satisfaction brings increased enthusiasm; enthusiasm leads to further activity of the similarly creative and hence basically satisfying nature

VIII

Let the curriculum mirror the community. Learning situations must reflect life in the pupil's own community if they are to be most effective. Since little transfer of training between diverse situations can be expected, it is essential that the core of the required curriculum directly reflect the basic social processes and problems of the community, rather than the logical subject areas of the traditional school, or the socially insignificant interest-units of many activity schools. Not otherwise will the curriculum relate functionally to the personal interests, experiences, and needs of children today.

The community is used as a living laboratory. Within every community, large or small, urban or rural, go on the basic social processes of getting a living, preserving health, sharing in citizenship, rearing children, seeking amusement, expressing religious impulses, and the like. When pupils study familiar though actually unknown processes, develop intellectual perspectives, improve emotional outlooks and serviceable personal skills as they observe and participate in these processes, they are discovering for themselves not only the problems they face, but also the resources they can utilize in attacking those problems. Thus life, as well as the school, becomes truly educative in their eyes.

Types of Community Participation by Pupils.—The utilization of community resources in teaching involves more than the mere collection of the facts of community life by pupils. It includes intelligent, responsible participation in community activities. Five levels of student participation ² may be identified, as follows:

1. Study of community conditions and problems by means of excursions, field trips, and surveys for the purpose of obtaining first-hand information.
2. Programs of community action planned by adults and carried out by pupils; many of the metal and paper salvage drives during the war were of this type.
3. Community activities in which adults and children share in planning and executing the plans, e.g., a campaign of traffic safety.
4. Pupil study of community conditions resulting in identification of a problem for solution, consideration of methods of solution, and initiation action among adults; e.g., a study of zoning laws in the community, followed by recommendation to the city council for more definite housing regulations.
5. Rendering of a needed community service by students as a result of their study of community needs.

² *Learning the Ways of Democracy*, Educational Policies Commission, National Education Association, p. 327.

Methods of Obtaining Information about the Community.—In order to gain a better understanding of their communities, elementary school pupils have used one or a combination of the following methods :

- Community surveys
- School excursions and field trips
- Interviews with local citizens and officials
- School camps
- Study of local records
- Informal observations

2. TYPES AND TECHNIQUES OF COMMUNITY SURVEYS

Types.—Upon the basis of scope, community surveys may be divided into two classes: (1) broad, general surveys of community conditions to obtain a general overview of the community; and (2) study of some specific problem of major concern to the group.

Properly planned and conducted, both types of surveys have great educational possibilities. While the main purpose of a survey is to obtain information which is relevant for community understanding, its chief educational value is dependent upon the manner in which the information is related to other significant learning activities. This demands intelligent analysis and interpretation. Merely to assemble information by means of surveys without a definite objective is educational profligacy under the guise of progressiveness.

In most cases the limited type of community survey in which data are obtained in regard to one community problem or area is the most suitable for elementary school groups. A definite problem or need which directly affects the pupils as members of a community, such as health, recreation, or traffic safety, may well serve as the basis of an investigation. The problem is even more appropriate if it is such that the pupils can take definite action resulting in discernible community improvement.

General Community Surveys.—The survey should arise out of the curriculum and return to enrich and vitalize it. The purpose should be clearly understood by the teacher and the pupils. The kinds of information and the methods of obtaining it should be determined by a process of democratic group planning. The pupils may be organized into various committees, and definite responsibility for some phase of the survey may be assigned to each committee. The committee findings should be reported to the entire class for evaluation and interpre-

tation. The total results of the survey should be organized into an appropriate form for presentation to the class and interested adult groups.

To insure the maximum educational values, the actual survey should be preceded and accompanied by a study of library materials on the subject. The details of making the survey should also be carefully considered in advance. Plans should be made with due regard to the maturity of the pupils who are to participate as well as the probable reactions of the adult citizens of the community.

The information obtained by a survey of general community conditions may be used as the basis of studies of a great variety of topics. In regard to general community surveys, Kilpatrick³ has stated the following caution:

Community analysis must take one beneath the externals. It is not enough to know that there are farm children in the school; one must know the life of the farm. It is not enough to see the stores, factories, churches, and public buildings, the good teacher must understand what these mean for the lives of the people. To the fact that 1,000 people work in a textile mill must be added personal acquaintance with the life struggles of some of those employees. That there are ten churches in a small town is a fact without much significance, but the history of those ten cults, their leaders, achievements, internal dissensions, and competitive activities may reveal pretty clearly the strength and weakness of that community today.

Study of Single Community Resource.—Among the outcomes of the general community survey may be the development of a desire on the part of the members of a class to make an intensive analysis and study of one or more community institutions or activities. In the typical community there are several types of institutions suitable for special study by elementary school classes, for example, factories, personal and professional services, social agencies and organizations, city and county agencies, cultural, educational, and religious organizations, and homes.

The factors which determine the choice of an institution for study are the kinds of institutions represented in the community, the objectives of the curriculum or course, the adaptability of the institutional materials to the abilities of students, and the interests of pupils. The following diary of an elementary school pupil illustrates the use made by a sixth grade class of one resource in their local community.⁴

³ William H. Kilpatrick, editor, *The Teacher and Society*, pp. 239-240.

⁴ National Education Association. Department of Rural Education, 1939 Year-book, *Community Resources in Rural Schools*, p. 66.

Sixth Grade—Portlock School

John reported to our class one morning that a Norwegian tramp steamer had docked at the Jones Storage Dock, and was unloading potatoes.

"Why are they unloading potatoes, do you reckon, Miss J.? Looks like we should be sending them potatoes instead," said John.

No one could answer the question. That afternoon several of the group went to the steamer and asked the captain about it.

The captain told them: "A tramp steamer picks up its cargo anywhere and goes anywhere. That is the reason it is a tramp steamer. This boat picked up these potatoes in New England. But it has no refrigeration, so they have to unload them here to keep them from spoiling."

"What will you do now?" asked Lois.

"We are exchanging these potatoes for flour, fertilizer, and some canned goods, which we will take and sell somewhere down the coast. We expect to go to South America before we are through. Then we will go back to Norway."

The boat stayed only three days. Then it chugged out of the harbor. A pilot boat carried them safely out into the ocean. Miss J. told us that nearly every foreign vessel has to have a pilot boat guide them in and out of the harbor as a safety measure.

The story about the tramp steamer was so helpful that every day or two we try to find some interesting news item or happening to share with the class. Sometimes we just tell it. Sometimes we hurry to school and write the happenings on the board so that everyone can read our stories. Our stories are much better now. So far we have found many things of interest to report, especially about the foreign vessels which come so often to our harbor.

3. THE EDUCATIONAL EXCURSION

Educational Values.—The school excursion, when utilized as a learning activity, is an effective method of providing direct experiences with the realities of social living. The educational purposes which may be served by guided school trips are the development of new interests and the intensification of old ones, the observation of objects and processes in their functional relationships, the clarification of concepts, the development of keenness of observation in particular fields, the supplementing and verification of information obtained from books and other sources, the illustration of abstract ideas, the enrichment and expansion of pupils' experiential background, and the acquisition of certain social abilities such as acceptance of responsibility and willingness to cooperate in group undertakings.

Planning for Excursions.—Considerable preparatory work is essential if the time and expense involved in school trips are to be

justified in terms of desirable educative outcomes. The process of cooperative planning and preparing for a trip by pupils and teachers presents an unparalleled opportunity for democratic living.

One of the first steps to be taken in planning a program of school excursions in larger cities is to make a community-wide survey of all available places of educational interest and value in the community. A central committee of teachers in each school should prepare a list of places appropriate for visitation. Individual members or sub-committees should then visit different places on the list to ascertain their educational potentialities. The information thus obtained may be recorded on cards to be filed in the school for reference.⁵ Each card should record the following information :

1. Name of person, place, or thing visited
2. Location
3. Possible value of visit
4. Transportation needed
5. Time appropriate for visit
6. Name of persons to be contacted and necessary preliminary notification

A committee of pupils and the teacher in each class should be formed to examine the information on file, select trips appropriate to their class work, and report a tentative schedule of their trips to the central committee, which in turn prepares a schedule of trips for the entire school.

Each teacher who is to serve as leader of a group has the responsibility of making pupils cognizant of the educational implications of each trip. Reading materials, films, pictures, and discussions relating to the trip assist in orientation. Extreme care is necessary in planning the routine details of the trip—transportation facilities, time schedules, food, and liability insurance.

The trip should be closely correlated with the actual flow of instruction in the classroom. Classes functioning along pupil activity principles encounter little difficulty in expanding their units of work to include school trips related to the various units. Each trip should be followed by class discussions in which questions which arise out of the trip can be cleared up and significant facts emphasized. The information obtained by pupils on a school trip should be organized, synthesized, and presented in the form of oral or written reports to other school or adult groups, thus providing experience in oral and

⁵ *Expanding the Classroom*, Harrisburg: Department of Public Instruction, Commonwealth of Pennsylvania, pp 9-10.

written English composition. Trips to rural areas may be correlated with the study of the poetry and fiction of farm life. Students may be inspired to express their reactions to the places visited by drawings and sketches, thereby using them as the basis of creative exercises in art. The work in the practical arts takes on added significance when pupils observe related activities in carpentry, masonry, and machine shop work in the community.

Techniques of School Excursions.—The maximum educational benefits can be derived from a school excursion only when :

1. The pupils and teacher recognize the need for firsthand information in regard to a problem they are studying.
2. An appropriate excursion is carefully selected. The resources available for study on the trip should be closely related to the topic which the class is studying. The trip should be justified in terms of the probable contribution it will make to the pupils' understanding of the significant problem. The outcomes should be proportionate to the time required and the adjustments necessary.
3. The suitability of a proposed trip can be ascertained by a preliminary trip by the teacher and a committee of the class in which its educational possibilities are surveyed. In the event the excursion is made to commercial and industrial establishments or civic agencies, permission and cooperation must be obtained from the persons in charge.
4. On the basis of the information obtained on the preliminary trip, the details of the trip are planned by the class. In the group planning, consideration should be given to the length of the trip, the route, needed equipment, suitable clothing, the optimum number of pupils to be included, and the most appropriate time to make the trip. Different committees may be assigned definite responsibilities in regard to each of these matters.
5. The class is given full and explicit information in regard to the plans formulated.
6. By means of class discussions, pupils formulate purposes of the trip.
7. Pupil orientation and motivation are provided in advance of the trip by study of its educational significance. Pupils may be oriented by the assignment of readings and the use of films.
8. Necessary arrangements are made with the proper school authorities.
9. Pupils formulate directions for observation and prepare a list of standards of pupil conduct. A group of pupils before they make a trip agree to :
 - a. Observe traffic laws on the trip.

- b. Obey safety precautions in order to avoid accidents during visits to the places selected.
 - c. Obtain enough information in advance of the trip to enable them to ask sensible questions.
 - d. Follow suggestions of the guide or other person in charge.
 - e. Observe carefully and listen attentively to explanations given by the guide.
 - f. Make brief notes of observations.
 - g. Exchange ideas with each other.
10. The trip is followed by pupil appraisals, class reports, discussions, and the relation of information obtained on the trip to the problem being studied.

4. DOCUMENTARY MATERIALS, INTERVIEWS, AND OBSERVATIONS

Documentary Sources of Information.—Information obtained by firsthand investigation may be supplemented by consulting written materials pertaining to the community. The United States Census Reports are a reliable source of data of a general character on population, housing, agriculture, and manufacturing. The records of state and municipal agencies contain more specific information relating to past and present community conditions. Local newspaper files contain an interesting running account of community activities. Social service and public health agencies may have records which are of value in the study of juvenile delinquency and health conditions in the community. Aside from the value of the information obtained from documentary sources, pupils under proper guidance may receive invaluable experience in the elementary techniques of research.

Interviews with Local Citizens.—Individual members of many elementary school classes interview persons engaged in various community occupations to obtain information in regard to general working conditions, duties and training of workers, and the like. Local public officials may be interviewed to obtain information in regard to current community issues and problems. Early inhabitants of the community may provide human interest materials for a study of local history.

Informal Observations.—The development of accuracy and keenness of observation in elementary school children can be enhanced by careful firsthand studies of many features of their local community environment. It is essential that pupils be taught the importance of verifying their observations by comparing observation notes and by readings on the matters observed. Valuable insights can be acquired

by pupils into many of their classroom learning activities by informal observations of objects and processes in their homes and other community situations in the immediate vicinity of the school. The child's interest which may grow out of these observations may serve as a basis for classroom discussions and study. In this manner the child's curiosity may be aroused and directed toward desirable learning goals under the guidance of a teacher who possesses and manifests a genuine interest in the "child's world."

Working with Parents.—In many schools parents have rendered valuable assistance as resource persons in providing educative experiences for elementary school pupils. Cooperative home-school relationships have resulted in mutual benefits to teachers and parents, as well as to the pupils. A recent publication of the United States Office of Education⁶ reports how parents helped in enriching the school experiences of children as follows:

A father takes the class. While Mr. M. chatted with his child's teacher after a PTA meeting he asked if the class would enjoy some colored movies he had taken of a deep-sea fishing trip off the coast of Florida. A time was arranged and Mr. M. brought his films, staying to give explanations and richer meaning to the pictures.

The children valued the experience, and these movies became a "community resource" to be filed for future use. The film is also listed under "available movies" in the file. The following year another teacher and group will find the same films valuable and appropriate.

Parents help with transportation. Much of the work on social studies for the fifth grade is centered on a study of their State and city. Trips are made by the children to many places of historic interest. Parents assist on problems of transportation.

A father sends an invitation. A father sends a message by his child offering their darkroom to the eighth-grade photography club. The same family donates month-old photography magazines to the school.

A mother invites a visitor from China. A classroom study of China brings forth many authentic Chinese pieces from homes. They become objects of study and entertainment and things to be shared together with other groups. A mother knows a lecturer on China and invites him to come to school. A child in the group remembers that her music teacher had taught in China. Both of these persons who knew China intimately come to talk to the group. Thus firsthand experiences are related to the children in a way that makes China a live and real place to them.

Persons who have recently lived or been in other countries should be invited to participate in a unit of work as the one described above, in order that

⁶ Federal Security Agency, Office of Education, *Working with Parents Handbook*, Bulletin, 1948, No. 7, pp. 19-20.

current information about the conditions and life of the country may be presented.

5. SCHOOL CAMP EXPERIENCE

Significance of Camp Experiences.—In his *Émile*, Rousseau wrote "Life is the trade I teach." Effective living in the world of today requires the development of cooperative skills in living and solving problems together. One of the major difficulties encountered by teachers has been that of integrating many portions of the school curriculum with the life experiences of pupils.

In boarding schools, an adequate opportunity is afforded for training young people to live together in a community under the direction of trained leaders. For pupils who do not attend boarding schools, summer camps and school camps afford to some degree a substitute and provide opportunity for a training which is different from and superior to any community experience available within the walls of a school building. Summer camps sponsored by schools, churches, commercial camp institutions, and philanthropic and social agencies have multiplied rapidly in recent decades and now reach several million young people annually.

In a school camp, children are placed in an environment favorable for learning to live together, to assume responsibility, and to explore source materials of the curriculum.

Planning Camp Educational Experiences.—Prior to the camping trip, the teacher and pupils should make tentative plans as follows :

1. Discuss reasons for camping
2. Plan the trip to camp, exploring interesting places en route
3. Study history of the camp area
4. Compile a list of articles the pupils will need at camp
5. Work out a tentative camp program

Plans should be made to insure that the pupils may participate effectively in such camp experiences as the following :

1. Getting acquainted with the camp area and the other campers
2. Observing trees, flowers, rocks, and birds in the area
3. Making things to be used in the area
4. Sharing responsibility for camp chores
5. Preparing programs of an inspirational nature
6. Taking special exploratory trips
7. Having evening get-togethers
 - a. Campfires
 - b. Songfests
 - c. Story-telling
 - d. Games



All campers share in camp chores

A songfest around the campfire
(Both photos Long Beach, California, Public Schools)



8. Planning leisure-time activities

- | | |
|-------------|--------------|
| a. Hobbies | d. Reading |
| b. Crafts | e. Hiking |
| c. Swimming | f. Dramatics |

Among the more important types of follow-up activities educationally valuable are these :

1. Computing camp expenses
2. Writing letters of appreciation to camp officials
3. Holding class discussions of camp experiences
4. Making plans to continue experiences begun in camp

There are many indications that camping is coming to be recognized as a vital educational experience for all children and youth. Notable among camp programs are those conducted by the schools of Atlanta, Georgia ; Catskill, New York ; Battle Creek, Michigan ; and San Diego County, California.

The teacher has an important role in promoting the development of the school camp movement. In the activities of the camp, the teacher serves as leader of her pupils and utilizes the camp counselors as resource leaders. Since the camp experience should be an integral part of the pupil's total educative experience, the teacher is responsible for assistance in planning, evaluating, and integrating the camp program along with that of the school.

The following criteria⁷ are proposed for a good school camp :

School Camp Purposes and Philosophy

1. The school camp should have, as its central objective, helping young people to understand the democratic way of life and to practice it in their relationships with others.
 - a. The school camp should treat each youngster as an individual. It should guide him, help him face his problems, help him develop his potentialities, and open up new interests to him.
 - b. The school camp should help youngsters to live with others, giving and taking, sharing and accepting responsibilities, constantly learning to widen the area of shared interests through partaking in enterprises with others for objectives commonly agreed upon by the participants.
 - c. The school camp should stress problem solving involving the process of critical thinking.
 - d. The school camp should teach youngsters to be concerned for human welfare, inside and outside the camp.

⁷ Adapted from *Toward a New Curriculum*, Yearbook, Department of Supervision and Curriculum Development, National Education Association, 1944, pp. 102-104

Programs to Achieve Purposes

1. The school camp should fully utilize its environment for educative ends, whether that setting be the field, forest, and stars of the organized out-of-doors summer camp, or the community setting of the work camp.
2. The school camp should teach social living and citizenship, using as the raw materials of education those situations and problems which arise in the everyday life of the camp. (Democratic values should be applied not only to the present camp problem which serves as the source but also to larger social issues related to the immediate problem.)
3. The school camp should involve camper and staff joint planning and cooperative conduct of the program.
4. The school camp should be an informal experience in which fun and joy are cherished and promoted.
5. The school camp should be a place where health and vigor are improved, where health, nutrition, and safety practices are taught by the demands of camp living, with direction by educationally alert adults.
6. The school camp should encourage and develop work experiences of a variety of kinds teaching the dignity of labor and the significance of shared responsibility in democratic living.
7. The school camp should continuously evaluate and appraise its program and periodically report its findings to interested groups.
8. While the school camp should fully utilize work experience, forest living, crafts, hikes, athletics, dramatics, and similar activities, it should not conceive its function to be that of a noneducative, nonintellectual agency devoted simply to recreation and physical culture.
9. While the school camp should fully utilize such activities as discussion, reading, forms of self-government, community visitation and study, speakers, radio and motion pictures, it should not conceive its function to be that of a nonsocial, nonemotional agency concerned with developing the mind of the child through the traditional curriculum centered on assuring college entrance for the few.

In short, the school camp may well become an integral part of the youngster's year-round educational experience, blending what is best in camping with what is best in schooling to foster democratic living

6. USING COMMUNITY RESOURCES IN TEACHING

The selection of community resources for use in school should be made in terms of very definite educational purposes. The value of relating the work of the school to community life as a method of enriching the curriculum and motivating pupils has been emphasized in previous sections of this chapter. The use of community resources has, however, a broader implication. If, through contact with the community, teachers are able to instill in pupils the recognition of

community problems along with a desire and a plan to improve conditions, one of the major objectives of education, namely, *social* sensitivity, will be achieved.

Ideally the information gained from various subjects and from observation of the community would be fused and utilized in the study of any problem. In schools in which the curriculum is still divided into separate subjects, however, teachers have been able, within the boundaries of each subject, to utilize various community resources in an effective manner. The first requisite for the successful utilization of community resources is for the teacher to know the interests, activities, and resource materials of the local community. The teacher can obtain information in regard to these matters through articles in the local newspapers, conversations with citizens, observation of community activities, and participation in community life.

Increasing Teacher Orientation.—In smaller villages and cities, and also in larger cities where city-wide inventories of available resources of out-of-school educational materials have not been made, the individual teacher should make such an inventory for the subjects she teaches. In doing this, it is recommended that she employ the cooperative efforts of the pupils in her classes, using as the criterion the value of the contribution to educational needs and the purposes of each subject.

While the number and type of resources available vary from one community to another, any community has numerous materials which can be used in different subjects. The amazing thing, however, is the apparent lack of consciousness on the part of many teachers that such educational opportunities exist in their immediate environments.

Many teachers are handicapped by not having readily available suggestions of resources which can be used in constructing school activities around community topics. A valuable in-service education program for teachers is one such as was carried on in Des Moines, Iowa, where interested teachers and community leaders compiled a list of resources which could be utilized in various areas of activity.

In many schools teachers have planned community excursions for the purpose of becoming better acquainted with their local environment and listing materials which might be made available for classroom use.

Variety of Approaches.—The techniques of using community resources vary considerably. Many materials gathered in the community may be brought into the classroom. Among these are exhibits and visual aids. Speakers from some community organizations may be invited to the school. Frequently it is necessary to send individuals,

committees of the group, or the whole group for interviews and observations. Such activities generally are called "excursions." Unless the entire group goes, the excursion demands the sharing of findings with all members of the class through reports and the utilization of pictures, charts, and graphs.

Another way to study community resources is to have the children draw a map of the city, using a color chart in which different colors represent such things as public parks and recreational facilities, industrial plants, schools, churches, libraries, post offices, municipal buildings, courthouses, and other points of interest.

In connection with the use of community resources, care should be taken to employ only those which seem to have the greatest direct bearing on the problem in hand.

Local Community Resources Available.—Communities vary in regard to the number and variety of resources available for use by elementary school pupils. The following list illustrates the types of resources to be found in many local communities. Few communities provide all those suggested. Many communities offer several of them.

1. Business

- a. banks
- b. business offices
- c. food markets—retail and wholesale
- d. hotels
- e. local stock exchange
- f. laundries
- g. lumber yards
- h. restaurants
- i. service stations
- j. shops
 - (1) antique
 - (2) animal-pets
 - (3) clothing
 - (4) hobbies
- k. stores
 - (1) drug
 - (2) drygoods
 - (3) department
 - (4) jewelry
 - (5) variety

2. Civic Organizations

- a. local chamber of commerce
- b. P. T. A.
- c. patriotic groups

- d. service clubs
- e. women's clubs
- 3. Communications
 - a. radio broadcasting station
 - b. telegraph office
 - c. telephone office
 - d. newspaper office
- 4. Cultural
 - a. architecture
 - b. churches, public buildings
 - c. art gallery
 - d. art studio
 - e. book stores
 - f. musical concerts
 - g. music, literary, and other study groups
 - h. private collections of art
 - i. public schools
 - j. schools and colleges
- 5. Governmental Agencies
 - a. city hall
 - b. county agricultural agents
 - c. county court house
 - d. fire department
 - e. forest rangers' headquarters
 - f. game warden
 - g. reclamation service office
 - h. police department
 - i. post office
 - j. school superintendent's offices
 - k. traffic safety officers
 - l. weather bureau
- 6. Health Service
 - a. hospitals
 - b. public health department
 - c. sanitation department
 - d. water department
- 7. Historical Resources
 - a. historical museum
 - b. local persons available as speakers
 - c. memorial markers and buildings
 - d. old landmarks
 - e. printed documents and records
- 8. Housing
 - a. private homes
 - b. public housing projects

9. Industries

- a. bakeries
- b. bottling plants
- c. cheese factories
- d. coal mines
- e. cutlery
- f. dairies
- g. factories
 - (1) canning
 - (2) oil refining
 - (3) sugar refining
 - (4) textiles
 - (5) metals
- h. farms
 - (1) experimental
 - (2) general crops
 - (3) livestock
 - (4) specialized
 - 4a. cotton
 - 4b. dairy
 - 4c. tobacco, etc.
- i. grain elevators
- j. ice plant
- k. printing plants
- l. public utilities, power and light
- m. rock quarries

10. Labor

- a. headquarters labor organization

11. Nature

- a. aquariums
- b. birds
- c. farm animals
- d. florist's shops
- e. insects
- f. plants
 - (1) land
 - (2) water
- g. public parks
- h. rivers, ocean front
- i. rock formation, hills, mountains, etc.
- j. soil
- k. water fowl
- l. zoo

12. Public Welfare

- a. child welfare centers



Recognizing trees and birds.

Learning about rocks.
(Both photos Long Beach, California, Public Schools)



- b. Community Chest headquarters
 - c. local Red Cross offices
 - d. orphanages
 - e. social welfare agencies
13. Recreation
- a. public recreational activities
 - b. motion picture theatre
 - c. private recreational facilities
 - d. public park system
14. Transportation
- a. airport
 - b. automobile service stations
 - c. bus station
 - d. docks, ferry
 - e. garages
 - f. harbors, docks, bridges
 - g. railroad stations—passenger, freight
 - h. streets, traffic signs
 - i. tourist services, trips to places of local interest

QUESTIONS, PROBLEMS, AND EXERCISES

1. To what factors do you attribute the increasing use of community resources in elementary schools?
2. Suggest a list of criteria which should be used in selecting community resources for study in an elementary school grade.
3. Present arguments for and against the school's assuming responsibility for improving present community life.
4. A major problem in utilizing community resources in teaching is that of coordinating them with other curricular materials. Select a community resource and describe how it can be related to the grade you teach.
5. Outline a community service project in which it might be feasible for elementary school pupils to engage.
6. How may a teacher appraise the educational value of an excursion which her class has made?
7. What contribution can educational films make to a study of local community life?
8. Describe in some detail the methods of utilizing a community resource in your teaching.
9. What factors should be considered before taking a class to observe an industrial plant, coal mine, or museum?
10. What are some of the differences to be recognized in making a general community survey in the rural area and in the urban community?

Chapter 18

EVALUATING PUPIL GROWTH

1. EVALUATION PROGRAMS

As the elementary school curriculum of the Three R's has shifted to the curriculum which is designed to provide for the development of all the child, so has the program of measurement expanded to a program of evaluation in all four areas—intellectual, emotional, physical, and social. The concept of measurement is much narrower than the concept of evaluation. A program of evaluation tests not only the areas of reading, arithmetic, and writing but in addition considers growth within the areas of appreciations, work habits, physical conditions, cooperation, creativeness, and human relationships. Measurement is concerned with the present status of the child. Evaluation directs attention to the causes that affect status and progress. Measurement depends upon results of tests which are given periodically. Evaluation takes place from day to day in all situations and also utilizes results obtained from tests.

The term *evaluation* is all-inclusive: it includes the objectives in all areas of learning; it concludes data obtained from objective measurements and from subjective appraisal; results obtained from inventory tests are as important as those from final tests; and the information obtained from behavior patterns on the playground is needed as well as the information obtained from classroom observation.

Evaluation may well be a cooperative enterprise. Teachers, children, parents work together in setting up objectives which serve as aids in clarifying the goals. During cooperative discussion periods children and teachers establish their own evaluative criteria for the various learning situations and with these as bases they appraise individual and group procedures in solving problems. During conferences parents and teachers evaluate the behavior patterns of children in an attempt to locate causes and to evaluate possible remedial procedures.

Importance of Evaluation.—Evaluation is an activity which is essential in every teaching situation. The objectives which are set up

guide those who are responsible for building the curriculum in determining content, experiences, techniques, and the evaluation instruments themselves. Objective measurements and subjective appraisals make it possible for those who are concerned with the welfare of children to know how much they have learned and how much they have improved in the development and application of skills, habits, attitudes, cooperation. This information is an aid in guiding and in motivating further learning. The results of evaluation indicate what needs to be done in order to correct misunderstandings, to correct ineffective techniques of teaching, and to adjust materials to the abilities of children. Summaries and cumulative records are valuable data in interpreting to the community the accomplishments of the school, in informing the community about the needs of the school, in securing its support in school legislation, and in reducing criticism.

Characteristics of an Effective Evaluation Program.—Good teachers in the past have attempted to discover whether children had reached a specific goal in the learning process. They have been concerned specifically with the intellectual growth and as a result, tests were devised to measure growth in the acquisition of factual information. The teacher of today is concerned with the evaluation of growth of the entire child in all aspects of his personality. Since the behavior patterns are of many types, devices of evaluation also must be of different types. An effective evaluative program which purports to meet the needs of today's children must embody the following :

1. Objectives defined in operational terms or in behavior patterns.
2. Situations which will foster the evaluation of behavior patterns.
3. Techniques which will be used in evaluating behavior patterns.
4. Interpretation of data obtained about learning
5. Records which facilitate evaluation.
6. Reports which are usable by those who are interested in the progress of children.

Objectives.—In order to evaluate growth or change, it is essential to know the objectives toward which growth is directed. In the school of today, the objectives are all-inclusive in terms of child growth and development and include the following factors: (1) mastery of the tools of learning; (2) acquisition of information, interest, skills, ideals, and attitude having high social value; (3) correction of physical defects and keeping well; (4) developing a sound healthy personality; (5) possessing satisfactory human qualities which make for good human relationships; (6) solving individual and group problems; (7) developing creative abilities. In order to make it possible to

use the objectives, it is imperative that they be stated in terms which are understandable and usable. The intangible factors which are involved in cooperation, critical thinking, and attitudes must be stated in operational terminology. For example, the operational terminology for critical thinking may be stated in the following terms:

1. Makes intelligent observations
2. Asks intelligent questions
3. Detects essential and nonessential elements in problems
4. Presents original ideas in planning situations
5. Summarizes materials satisfactorily

Even though the task of setting up major objectives in operational terminology is a difficult one, it is essential to effective measurement of results. It is imperative that the teacher evaluate reactions of children in terms of specific behavior patterns. Since the needs of the individuals, of society, and of our democracy are not static but are ever changing, it means that our goals must be critically scrutinized on the basis of change. Children, with the guidance of teachers year after year, will reinterpret the major objectives by setting up criteria based on their needs, capacities, and interests. Thus, the statement of behavior patterns in concrete terms will be understood by children, parents, and teachers.

Evaluative Situations.—In order to bring about desirable changes in behavior patterns, it is necessary to plan for situations which will provide the child with a desire to raise his level of accomplishment and make efforts to bring about needed improvement. No classroom can provide possibilities for the development and evaluation of all behavior patterns. Intellectual skills and abilities can best be developed and evaluated in a typical classroom. Social amenities are fostered and observed most satisfactorily on the playground, in the lunch room, on an excursion, at a birthday party. Attitudes and appreciations should be studied in situations which are characterized by an emotional tone; for example, an attitude of good sportsmanship is genuine when at a ball game the members of the losing team were "good sports." Mental and emotional disturbances may be evaluated through creative releases, such as finger painting, drawing pictures, and writing poems. Physical conditions, such as fatigue and listlessness, are observable in the classroom, on the playground, on excursions, and at home.

Techniques of evaluation are determined by the type of behavior pattern which is being evaluated. In determining growth in the tool subjects, such as reading and arithmetic, standardized achievement

tests and teacher-made tests may be used. Readiness of children in various areas of learning may be determined by means of readiness tests and diagnostic tests. Intelligence tests are means of guidance in determining the power of the children in mastery of intellectual skills. In order to measure the degree of human social relations, sociograms may be used.

In addition to "tests," teachers devise and use a great many situations in which the behavior of the learner may be observed as it brings into relief the degree of learning that has taken place in the specific areas.

Among the types of information most useful in evaluation are the following :

1. Rating of material things produced by learners, e.g., drawings, clothing, foods, objects in arts and crafts work. Development in conversation
2. Rating of skills developed by learner as observed by teachers, e.g., in getting along with others, in singing, in speech, in personality
3. Rating in observations, in socially preferred ideals and attitudes, e.g., honesty, responsibility, concern for the welfare of all, etc.
4. Anecdotal records of behavior of children based upon observation
5. Data concerning child growth gathered from
 - a. Attitudes and conversation of other children
 - b. Conferences with the child himself
 - c. Conferences with parents
 - d. Sociograms and similar devices
 - e. Health records
 - f. Physical examination records

Interpretation of Data.—The interpretation of data obtained by means of different evaluative aids includes the following factors :

1. Translation of test scores into meaningful terminology
2. Interpretation of the successes and failures
3. Integration of information obtained by means of different evaluative instruments and aids
4. Presentation of recommendations for remedial measures and for guidance

The information acquired should be organized and recorded in such a way as to facilitate interpretation of results and to make material available for guidance and motivating purposes. The cumulative records which include all information are most desirable.

2. CHARACTERISTICS OF GOOD EVALUATION

Types of Measurement—Daily Class Marks.—In schools in which the work is organized on the daily class period plan, some teachers record marks based upon pupils' achievement in each recitation. Those teachers consider a series of daily marks as one of the bases upon which a final evaluation of each pupil's work should be made. Some of the purported values of the daily class mark are :

1. The daily mark is an immediate incentive for pupil study.
2. A large number of daily marks provides a broad base upon which a final mark in the course can be determined.
3. The use of the daily mark decreases the emphasis upon final examinations.
4. Its use makes pupil evaluation a continuous process throughout the course.
5. It serves as the basis of pupil diagnosis and remedial work.
6. Its use assists in establishing pupil habits of attention during the recitation.

Many teachers are convinced that when superior teaching is being done the disadvantages of the daily marking procedure far outweigh the advantages. The teacher tends to become a bookkeeper intent upon recording a symbol opposite the name of each pupil. Elaboration and explanation by the teacher are necessarily reduced to a minimum, lest he invalidate a pupil's mark. Thus the recitation becomes only an oral testing period. The formality of the situation limits pupil discussion to the questions, whereas spontaneity and freedom of expression should be encouraged. Each pupil attempts to outwit the teacher by preparing the answers to the questions he thinks he is most likely to be asked. The inequality of the questions in respect to their difficulty and importance does not provide a common basis for evaluating responses of the different pupils. Since it is impossible to ask each pupil more than one or two questions, the sampling of his information on the lesson topic is so limited as to make it very unreliable. The forced attention of pupils is very likely to destroy genuine interest in the subject by focusing it upon the mark which is being recorded.

In the event it seems advisable to make a record of the pupils' work in the daily recitation, the teacher can make notations periodically in an informal manner. This procedure makes it possible to use the recitation as a clearinghouse for information and for exchange of ideas, rather than as a situation in which an attempt is made daily to frighten the pupils into learning.

Notebooks and Written Work.—In connection with several subjects, it seems advisable to require pupils to keep notebooks in which they record class notes and reports of outside readings. While it is feasible for the teacher to inspect notebooks at frequent intervals for diagnostic purposes, it is not necessary to record evaluation of the notebook in the form of a mark. Frequently a casual examination of the notebook material may reveal the information necessary for guiding the pupil in the subsequent work of the subject. In the case of both notebooks and written papers, notations indicating errors should be made in order to assist the pupils in revising the materials. Unless the work on notebooks and other written papers is done in the classroom under the supervision of the teacher, it is difficult to ascertain what weight should be given them in a determination of the final grade. The understandings and other learnings which the pupil acquires as a result of his notebook and other written work should be revealed, not merely on the basis of the materials themselves, but rather in connection with his performance on examinations and his other classroom activities.

Oral versus Written Tests.—Considerable thought has been given by authorities on measurements to the relative values of oral and written tests in programs of evaluation of pupil achievement. In practice, the amount of time given and significance attached to the two types of tests has varied greatly from school to school as well as from one classroom to another. While there is disagreement in regard to the comparative merits of oral and written tests, many teachers believe that both types have an important part to play in achieving the numerous purposes of measurement in teaching.

The advantages of the oral test in the classroom may be summarized as follows :

1. It gives the pupil experience in oral expression.
2. Pupils derive certain benefits from the responses of other pupils.
3. The total number of oral questions answered by a class is greater than those that pupils can write in a given class period.
4. Errors made by pupils can be discovered and corrected immediately in the class period.
5. The visual sense utilized in reading and writing about a subject is supplemented by the use of the auditory sense in an oral test on the same material.
6. The extraneous factors of handwriting and neatness of papers are absent.
7. There is less paper work for the teacher.

As an instrument of measurement, the written test is distinctly superior to the oral test in several important respects, as follows:

1. Since all the pupils of a class answer the same list of questions, the teacher has a fair basis for comparison of test results.
2. Written responses to written questions can be evaluated on a more objective basis than oral responses.
3. By the use of objective types of written tests, responses of each pupil to a large number of questions can be obtained in a class period, thus reducing the unreliability of limited sampling by means of the oral test, in which each pupil has the opportunity of answering only one or two questions.
4. The difficulty and importance of the questions answered by different pupils are equal, which validates marks given on a comparative basis.
5. The written test paper provides a record of the pupil's achievement which can be carefully analyzed for diagnostic purposes.
6. The influence of extraneous factors in testing, such as pupil timidity and handicaps in oral expression, are minimized.

It appears probable that a combination of tests of considerable variety and scope is necessary in an adequate program of testing.

Score Cards or Ratings.—In some subjects it is possible to employ score cards and ratings of a finished product which may be taken as a measure of the growth of the learner—not only of his information, but of his understandings and his skills. Ratings are particularly useful in the teaching of art, industrial arts, agriculture, and household arts. Typical of such rating devices are the following for use in measuring clothing construction and in measuring social participation:

SCORE CARD FOR RATING DRESS CONSTRUCTION

I. Suitability to Individual	35
Neckline	5
Color	5
Trimming	5
Design of material	5
General line of dress	5
Suitability to occasion	5
Design of garment	5
II. General Appearance	35
Fit of garment	20
Cleanliness	5
Pressing	5
Originality	5

III. Workmanship	20
Seams: width, evenness, suitability	5
Stitches: length, neatness	5
Hems: evenness, stitching	5
Findings } : evenness, stitching	5
Facings }	
IV. Cost	10

EVIDENCE OF RESPONSIBLE PARTICIPATION IN SOCIALLY SIGNIFICANT
ACTIVITIES *

Type of Participation	Evidence		
	Weak	Average	Strong
Attends meetings			
Prompt at meetings			
Makes suggestions.			
Shows interest			
Volunteers work.			
Obeys club rules.			
Cooperates with other members			
Follower as well as a leader.			
Cheerful.			
Suggests worth-while projects			

* Adapted by Evelyn M. Herrington and Maurice E. Troyer, Syracuse University.

It is a valuable educational experience for members of a class to develop such a rating device and to employ it in rating their own work and that of their fellow learners.

Anecdotal Records and Informal Observations.—Teachers need not rely entirely, for data concerning learner growth or status, upon situations especially devised for measurement. The more intelligent and observant teacher will be constantly looking for evidences of growth, of maladjustments, and of failure to grow. She will constantly observe the written work of students at their desks, their participation in discussions, their questions, and their performance in situations outside the classroom, with a view to gathering data concerning the growth of the individual pupil.

Almost daily she will wish to record her observations of evidences

of growth or lack of it on the part of at least a few of her students. These may be entered in classbooks, in memo books, or in files of pupil data. These observations may occasionally take the form of brief anecdotes such as the following :

In reading period today, Mildred did not work well even after receiving individual help in analyzing difficult words. She seems to be discouraged in learning to read and is attempting to gain admiration in her group by showing off. I think that the reading material is too difficult and that by locating her reader level, she will do satisfactory work and as a result gain the admiration of her friends because of her accomplishment.

Understanding of Evaluation.—Since instruments of evaluation may measure several different factors, it is imperative that the evaluator have in mind clearly the behavior patterns which he is evaluating. An achievement test in arithmetic will indicate whether or not the child is having difficulty with the process of long division, but it may not show diagnostically what division facts and subtraction facts have not been mastered. A child scoring high in a recognition vocabulary test cannot always be considered as having a good comprehension in reading ; in fact, his comprehension may be negligible. A child possessing a wealth of information on the culture of a nation cannot be considered as having no prejudices toward its people.

Validity.—Validity means that the evaluating instrument must measure or evaluate that which it purports to measure and that it tests what the teacher desires to test or to measure. There are several ways by which one may judge the validity of a test. The simplest way is to examine the material of the test and make a common-sense evaluation of it as a measuring instrument for the subject or function which it tests. In doing this it is essential that the evaluator get in mind or on paper before him the objectives of the outcomes desired (e.g., information, understandings, ideals, attitudes, skills) and then see to what extent the test in question measures growth toward the objectives in terms of those outcomes and in proportion to their relative importance.

Another procedure is to compare the subject matter of the test with studies or discussions of the objectives and essentials of the subject and with studies of the relative social utility of the items within the course. It is frequently helpful to construct test items as learning progresses and coordinate them when a test is to be given.

The most effective method of determining the validity of a test, however, is to discover its correlation with a known valid criterion of the achievement or behavior pattern which the test is used to measure.

The results obtained are usually indicated in the instructional materials that accompany the tests.

A test that may be valid for one group of children may not be valid for another group of children. For example, a test that is given to a group of children who are bilingual, and who have difficulty in expressing themselves in the language in which the test is written, will be invalid for that particular group of children in that the scores are a measure both of language difficulty and of whatever the test was intended to measure.

Reliability.—A measuring instrument is reliable if it gives consistently the same score when repeated under similar conditions and there is no variation in the score even though different individuals may score the paper. In addition to the quality of objectivity with respect to scoring, reliable tests should not record chance fluctuation in the person being tested. Barring gross error on the part of the person doing the measuring, approximately the same result is obtained when a foot rule is employed to measure the width of a window, no matter how many individuals make the measurement or how many times it is made. This should likewise be true with school achievement tests. However, tests differ in the ability to call forth consistent responses from the student. On some tests a pupil's score will vary appreciably from one testing to another and for no apparent reason.

A Fundamental Characteristic of Validity is Objectivity.—Objectivity in tests means freedom from individual bias or idiosyncrasy in the scorer and hence implies that two or more evaluators will arrive at the same evaluation. Many tests are so devised that it makes no difference who scores the test; barring error, the score will be the same. Everything else being equal, tests which permit of no disagreement between scores are much to be preferred.

The length of a test also determines its reliability. Up to the limit of fatigue or varying attention, the longer the test, the greater is the opportunity to find what the child knows or does not know. Administration procedures often affect the reliability of a test; if a child becomes disturbed and does not put forth his best effort, for him the measure is not reliable.

The coefficient of reliability of tests varies all the way from a little above zero up to .90 or .95. In the very large majority of well-made tests, the coefficient of reliability lies between .75 and .85 for a given grade, e.g., the fifth grade, and are rarely found to be more than .90. Tests having reliability coefficients of more than .80 for a single grade may be used with confidence. When the reliability is

below .65, two forms of the test should be combined in order to get reliable scores if the test is used at all. In general, tests having reliability of less than .75 for pupils in a single grade, or .90 for a range of three grades, are hardly worthy of use where exact measures of individuals are desired. For comparison of groups as large as 25 or 30, reliability of .60 or .65 is sufficient. Reliability coefficients based on the performance of children in more than one grade should be higher than those based on the performance of children of one grade only. Like measures of validity, measures of reliability should be furnished with the description of tests, and should be noted by prospective users. It should be remembered that in using diagnostic tests the reliability of an item or a section of the test is usually materially less than that indicated by the reliability coefficient for the entire test.

Practicability.—Tests should not be long enough to develop fatigue or boredom on the part of children. Instructions and directions should be as short and simple and clear as possible. The ease of administering an evaluative measure and of checking results is also important.

Various devices are employed to keep at a minimum the amount of time necessary to score the tests. One device is to use strips of paper or cardboard with correct answers so spaced as to fall beside the blanks for the answers on the test. These may be placed edge to edge with the test paper, so that the correct answer is close to the pupil's answer, and can easily be seen. Another form is the cardboard answer key with apertures which, when the key is superimposed on the test paper, fit directly over the spaces provided for the pupil's answers, thus enabling the scorer to compare the answers on the pupil's test paper with the answers printed at the edge of the openings.

Interpretation.—Instruments of evaluation which cannot be interpreted by classroom teachers with a minimum amount of effort are not practical. Data to be used effectively by teachers must be translatable into meaningful, descriptive language which makes possible an appraisal of growth that can be communicated to children and to parents.

Usable Forms.—With a few exceptions the teacher attempts to bring about as much growth as possible in view of the limitations of time available and the degree of intelligence and maturity of the learners. She is dissatisfied if nearly all pupils reach only a minimum level. Since this is so, she desires to construct or to select an evaluation device which will measure various degrees and amount of growth.

She also wishes to use a measuring device with available data and techniques which will enable the teacher and learner to evaluate growth by means of its measurements.

Most useful for this purpose are data concerning the performance of other individuals on the same measuring instruments under the same conditions. With many standard tests such data are provided in the form of percentile norms, e.g., the scores of ratings made by the pupils who rank 95th, 90th, 85th, and so on in a hundred, or proportionately in any smaller or larger group of persons. To be the most useful such norms must possess the following characteristics :

1. They should be based upon at least several hundred cases, and preferably several thousand cases, of learners of comparable age and grade placement.
2. They should have been obtained under conditions similar to those under which the test is to be given, for example :
 - a. At the same time in the course, that is, at the end of the first semester, in the middle of the second semester.
 - b. From a group of the same general level and distribution of ability as the one to be tested ; or if not, then from a group of known general level and distribution of ability so that appropriate allowances may be made

In interpreting the test scores by means of norms, consideration should be given to such matters as :

1. The degree to which the teacher has emphasized the objectives or areas emphasized by the test
2. The amount and character of instruction the class may have received in previous years and in other areas likely to stimulate growth along the lines emphasized by the test
3. The general intelligence of the class or the particular individual
4. Any unusual distracting or motivating conditions attending the giving of the test

3. OBJECTIVE TESTS AND THEIR CONSTRUCTION

Objective Tests.—For more than a quarter century we have been using, experimenting with, and improving what have been called “objective” tests and examinations, such as true-false and multiple-choice tests. Among the things we have learned are that objective tests are not wholly objective and that “essay” tests can be so constructed and scored as to be less subjective than they ordinarily are. It should be noted that essay tests are not practical for children in the lower elementary grades.

The construction of good objective tests requires great care and considerable time. Teachers have discovered that there may be disagreement upon whether a statement is true or false and upon which is the best answer among several choices presented. They also had difficulty in constructing objective test items which do not permit different interpretations by the pupils. The most serious of all limitations is that teachers employing objective test procedures have tended to include too many trivial items, too many isolated factual items (means and not ends of learning), to the neglect of items measuring understanding, mental skills, attitudes, interests, ideals, and habits. Only recently has anything like adequate attention been given to the matter of constructing objective test items which do measure other types of outcomes.

While particularly in the upper grades "objective" tests may be used to excellent advantage, they should always constitute only a part of the evaluation program. Among the more commonly used types of "objective" test items are those discussed in the following paragraphs.

The True-False Test.—The true-false test consists of a number of statements the truth of which the child is asked to affirm or deny. The testee is usually instructed to encircle or to check one of the two words *yes*, *no*, one of the two letters T, F, or one of the two words *True*, *False*; the test may be set up so that the testee writes in the blanks provided either True or False, Yes or No, + or O.¹ The blanks, words, letters, or symbols should be placed in a column at the right or at the left of the respective statements. If placed at the right, the testee may write without having to place his hand over the test paper. Below is a portion of such an examination

1. There is land on both sides of a strait.	Yes	No
2. An isthmus is a narrow strip of land that connects two large bodies of water.	Yes	No
3. An island is a small piece of land surrounded by water	Yes	No

In recent years the true-false test has come somewhat into disrepute, only in a small part deserved. The principal weaknesses for which the true-false test has been criticized are (1) lack of reliability, (2) lack of validity, and (3) unintelligent use by the teachers. Much of the criticism centers around the use of petty detailed facts and the failure to use statements calling for judgment and the more important facts and principles.

¹ See "The Measurement of Understanding," the *Forty-fifth Yearbook of the National Society for the Study of Education*, Part I, pp. 130, 295-297.

It is obvious that the chance of guessing the correct answer in the true-false test is greater than in other types of tests. On the other hand in a given period of time a greater number of true-false items than of other types can be covered in a test and, if the number of items is great, students will tend to break even on bad and good ones. Approximately one and a half times as many true-false items can be completed as five-choice best-answer or multiple-choice items. True-false tests are about as reliable as other types of objective tests requiring the same amount of time for taking.

Multiple-Choice or Best-Answer Test.—Among the most commonly used of all types of objective tests is the multiple-choice or best-answer exercise. It has been found that this type of test is more valid and reliable than the true-false test and also checks on a large number of abilities, such as discrimination, judgment, and understanding. Teachers who construct multiple-choice tests must be aware of the fact that all responses deserve attention and require the reader to think critically as he makes his decisions. No item should contain any clues to the correct answers, nor should items be included which are obviously false. The task is to select, from three or more possible answers, (four or five are probably best), the correct one or the best answer to the question or problem stated. Children may be instructed to check the correct response in any of several ways, such as to draw a line under the correct answer, or to write the number or letter of the responses on a blank or in a parentheses placed at the beginning or end of the statement.

Multiple-choice tests take different forms as presented in the following examples :

Directions : Select the one correct spelling in each line, and underscore the correct spelling :

houce	hous	house	howse
city	sity	citi	cite
beleeev	believe	believ	beleive

Directions : Underline the correct words in the following sentences :

The wind (have, has, or had) blown.

Temperature is measured with (a barometer, an anemometer, a speedometer, a thermometer)

Directions: Draw a line under the right ending for the sentence:




Beavers build their homes near the water
 near a town
 near the highway
 near the mountains

Directions: Place an X before the best reason why the summers of Colorado are cooler than those of Kansas:

Much of the state has an elevation of at least 5,000 feet above sea level.
 The prevailing winds blow from the west.
 Colorado is on the fortieth parallel.
 Colorado is in the West.

Matching Tests.—Matching tests are not difficult to construct and are used in order to measure ability to see relationships, to associate ideas, and to understand concepts of symbols, such as words, numbers, abbreviations. Items are arranged in groups of three or more and are matched with terms grouped in a second column. A form of matching test is the ranking or arrangement test in which a given number of items are ranked in the order of time of occurrence, merit, or in accordance with some other criterion. For example, the child may be instructed to: "Arrange, in the order of their happening, the following events by writing the number 1 after the one happening first, the number 2 after that happening next, and so on." Illustrations of matching tests are given below:

Directions: Draw a line from the word to the picture that matches it.

House	
Tree	
Ball	

Directions: Draw a line from the word in Column 1 to the word having an opposite meaning in Column 2.

1	2
right	sour
black	sad
sweet	left
happy	white

Directions: Write in the blank before each inventor the number which corresponds with his invention.

- | | | |
|------------------|-------|--------|
| 1. telephone | _____ | Edison |
| 2. electric lamp | _____ | Morse |
| 3. telegraph | _____ | Bell |

Completion Items.—The completion item consists of a statement from which one or more key words have been omitted and enough data are given to designate what is wanted. The child is asked to fill in the blanks with the correct words.

The completion test exercise has one prominent advantage as compared with certain other types of objective examinations, in that it tends to keep guesswork at a minimum and that it calls for recall rather than merely for recognition of correct answers. As usually employed it may not be entirely objective, as it may call for subjective judgment relative to the correction of the answers. It is also likely to encourage learning of exact wordings of statements rather than of the content of ideas.

The completion exercise possesses the advantages common to all objective examinations. It also possesses the particular quality of the recall type of exercise, namely, the power to recall the correct response and to distinguish it from others. It possesses a peculiar shortcoming in that it places a premium upon the ability to form rote or verbal associations. Also, unless the items making up the test are chosen skilfully, they are likely to be somewhat indefinite, permit of more than one correct answer, or furnish insufficient data to stimulate the pupil to the correct response, even if he may know it. These pitfalls should be kept in mind when a completion test or check is being constructed. Some sample items follow:

1. Cirrus clouds are composed of _____ particles.
2. Clouds are formed whenever there is _____ in the air

Directions: Fill in the blanks with N, NE, S, SE, SW, W, etc

1. Chicago is _____ of Detroit
2. Philadelphia is _____ of New York City
3. San Francisco is _____ of Denver

Essay Tests.—The “essay” types of test materials possess certain limitations and weaknesses as well as unique value. Only a few essay items can be included in an examination and therefore the items should be selected with very great care in order to constitute a good sample of all the growth the test is intended to measure. Essay questions are

often open to misinterpretation. Because of the small number of essay questions in any given examination, to misunderstand what is called for and write an answer to a question wrongly interpreted may result in a total test score which is a very misleading measure of the learner's status or growth.

In answering essay questions, children are likely to consume too much time in writing, wander from the main idea, and distribute their time unwisely. Marks in essay tests are quite likely to be measures of composition—of ability to interpret questions, to write concisely, and to distribute time wisely. These are outcomes other than knowledge, understanding, general habits, and other results which the instructor may have been attempting to achieve.

One of the most important ways to increase the objectivity and hence the reliability and functional validity of an essay test is to prepare for each question in advance an answer key covering all the more important points which an excellent or nearly perfect answer would include. With the key prepared carefully in advance, the teacher can then score each paper on a relatively objective basis, depending upon the number of points adequately treated in the pupil's answer. Before starting to score the paper the teacher will find it useful to prescore answers of a few papers on each question, with a view to testing out his key. Frequently the key is revised after reading a few answers. Many teachers find it useful to provide some scale of points for evaluating qualities of answers such as allowing 3 for a nearly perfect answer, 2 for fairly good answers on the more important points, 2 for nearly perfect answers on all but one or two important points, and 1 for partial answers on less important points.

Diagnostic Tests.—Diagnostic tests serve the purpose of discovering specifically those skills, facts, and knowledges in which the children are weak. This information constitutes the content of a remedial program. The numbers and variety of diagnostic tests sold by commercial concessions are large. Catalogues and sample copies may be obtained by writing to the following publishers:

California Test Bureau, Los Angeles, California.

Scott, Foresman Company, Chicago, Illinois.

Educational Test Bureau, Minneapolis, Minnesota.

Public School Publishing Company, Bloomington, Illinois.

World Book Company, Yonkers, New York.

Lyons and Carahan, New York, N. Y.

Rand McNally & Co., Chicago, Illinois.

Teachers College, Bureau of Publications, Columbia University, New York, N. Y.

Bureau of Educational Research and Service, University of Iowa, Iowa City, Iowa.

C. A. Gregory Company, Cincinnati, Ohio.

Cooperative Test Service, New York, N. Y.

Using Standard Achievement Tests.—Teachers using standardized achievement tests should use tests having equivalent forms. One form may be used in the fall in order to establish the basal evaluation; then by giving another form later comparisons may be drawn, thus making it possible for the child to see his progress in an objective way. By translating the raw scores into meaningful terms, such as age norms, percentiles, reading age, educational age, accomplishment quotient (depending on the construction of the test, the information of which will be conveyed to the teacher by means of the instruction sheet which accompanies every test), the teacher and child will detect those areas in which the children are low and high. If a child scores one or more years below grade and if his mental age is one or more years below the mental age to master the work, the work is too difficult for him. Adjustments should be made in goals to be achieved and in materials used, thus making it possible for the child to master his problems. If a child is one or two years below his normal grade and if his mental age is one or more years above the mental age to master the work, further diagnosis is needed—there may be an emotional block, a reading problem, frustration because of home conditions, physical fatigue because of malnutrition or working late at night in order to help with the family budget; it is evident that in situations of this type causes must be removed. Diagnostic tests will reveal the nature of a remedial program.

4. DEVISING MEANS OF MEASUREMENTS

General Principles of Constructing Pencil-and-Paper Tests.—The procedure in constructing an objective examination is summarized in the following paragraphs.

First, determine what is to be covered in the examination, and get in mind the outcomes of teaching which constitute the chief objectives of the learning activities; that is, what information, what skills or habits, what ideals or attitudes are aimed at in presenting the material to be tested, and which of these is of most worth.

Next, determine how much time is to be given to the test, and estimate how many exercises may be completed by the pupils in the time available.

Select about one and one half times as many exercises, testing the possession of information, skills, habits, ideals, or attitudes emphasized, as may be given in the time available, consciously attempting to

distribute these over the course somewhat in proportion to the importance of each outcome in the ground covered.

In formulating objective test questions or exercises, one of two plans may be employed. All the test exercises may be of one type, true-false, completion, or multiple-response; or the examination may be made up of different types. Ordinarily the latter procedure is preferable, since the most effective type of exercise for each item may be chosen on an individual basis. Items should be formulated in the types most appropriate to the achievements to be tested. Items which are not of primary importance and which are difficult to fit into any form may be tentatively set aside to be used only in case they are needed to give balance or to complete the examination. The shorter the question or exercise, the better.

Care should be taken to formulate exercises in such a way that something more than memory is tested. Some questions involving reasoning and attitudes should be provided.

Care should be taken to include some questions which all pupils are likely to answer, and some which very few are likely to answer. The other questions should range in difficulty between these extremes, with a goodly percentage of questions of average or reasonable difficulty. This precaution is desirable in any examination.

Go over the test exercises carefully, discarding those which are ambiguous or misleading, or which demand elaborate qualification. Reduce the number of test exercises to the desired number, being sure to retain such exercises as will give the test "range," as provided for in the preceding paragraph, and those testing important objectives. Discard those exercises which are least objective and which serve to test powers tested by other questions or exercises. Care should also be taken to preserve proper distribution among the different parts of the material covered.

Rearrange the remaining exercises into groups by type; that is, group all the true-false exercises together, all the multiple-choice together, and so on.

Rearrange within the groups in the apparent order of difficulty, or in some other logical order. The most difficult exercises should not be placed toward the beginning of the test.

In preparing the blank forms for the test, attempt to control the position of the answers, allowing for them preferably along one side of the page to facilitate scoring.

Finally, prepare a key of correct answers in such form that it may be laid alongside the pupil's paper and thus permit rapid scoring. A cardboard key is very convenient.

Special Suggestions on the Framing of True-False and Multiple-Choice Exercises.—A true-false examination should contain at least fifty or sixty items to be reliable, although of course a smaller number may be employed when the true-false items form part of a test consisting of several types of exercises. The number of true and the number of false statements should not be exactly equal, nor always approximately equal. It is better to vary procedure in this respect, as otherwise students will learn to adapt their answers in order to distribute them equally between true and false. However, not less than 25 or 30 per cent of the statements should be of one type. True and false statements should neither be bunched nor alternated, nor should they be arranged in any systematic order which would give any clue as to which are true and which false. Care should be exercised to select false statements which are not obviously false, and which will not permit the student to identify the correct answers by eliminating the obviously incorrect ones or by any other process of reasoning which does not involve the possession of the knowledge or skill to be tested. The false statement should in every case be one which the student would be as likely to call true as false if he did not possess the knowledge or other educational outcome which the statement is designed to test.

For example, the statement that "An ant has three legs" is not a good statement to use in a true-false exercise. Most pupils will identify it as false without any reference to how many legs an ant has, because they do not believe that any insect has an odd number of legs. Likewise the statement that "Chicago is the capital of Michigan" may be identified as false without knowing what the capital of Michigan or the capital of Illinois is, because the pupils know that Chicago is in Illinois.

When preparing multiple-choice questions, the correct answer should not always occupy the same position (for example, third in the possible choices), nor should the location of it follow any consecutive pattern, such as fifth, fourth, third, and so on.

In selecting completion exercises, care must be taken to leave only key words blank, and to furnish, in the portion of statement given, enough data to constitute a fair test—that is, to designate what is wanted. If this is not done effectively, the test may degenerate into a guessing contest.

In an enumeration test one should attempt to formulate exercises which require a minimum of writing and for which there is only one correct answer, or at least exercises which will permit little difference in scoring between different teachers. Ordinarily it is better to avoid

using exercises in the scoring of which it would be necessary to give partial credit to some papers.

Suggestions for Constructing Essay Examinations.—There is a great variation in the reliability and validity of essay examinations. Their quality is dependent very largely upon the amount of attention and skill devoted to application of the following principles and suggestions:

1. Select topics which taken as a whole comprise a good sample of the more important sections of the area of the subject which the examination is intended to cover.
2. Be specific and clear in stating the topic and the instructions for dealing with it; for example, if learners are asked "to criticize" they should be told upon what basis or with respect to what. Frequently there should be subordinate or supplementing instructions, as in the following:

Discuss farming in the lowlands of southern California with particular reference to the farmer's dependence on irrigation, to the irrigated crops that are grown there, and to the changes brought about in farming as a result of improved farming equipment.

Rarely if ever should pupils be asked to "Tell what you know about . . ."

3. State each question or make each statement so as to measure something besides recall of information, i.e., understanding of the information, its importance, its implications, etc.
4. Word each question or topic so that the pupil will more probably write his answers in sections or parts in response to the different points to be discussed.
5. Estimate the time required by a slow pupil to write out an excellent answer to the question and indicate that amount of time in parentheses after the question.
6. Try the questions out on some disinterested child to see if they will be clearly and accurately understood.
7. Attempt to keep at a minimum the time required for writing answers. It is of great value in essay examinations to call for short, concise answers so that more questions may be asked.
8. Prepare questions which will permit objective scoring as far as possible. This is achieved by planning questions in the manner suggested in 4 above. Questions so planned can be scored against an inventory of the parts required in a perfect answer.

For oral questions, see the discussion and suggestions in Chapter 14.

5. EVALUATION IN DIFFERENT AREAS

Tests of General Mental Ability (Intelligence).—Intelligence tests are indicative of the child's ability to succeed in the language arts and not in such areas as art, music, mechanical ability, human relationships. The individual test is the most reliable, but time-consuming in its administration. For practical purposes group tests are reasonably reliable, but it would be advisable if in doubt about a child to use the individual test. Children who are bilingual or who have a reading disability will rate higher on the nonverbal test, which is a truer measure of their mental ability.

Evaluating Aptitudes.—Aptitude tests are means by which we predict the fields in which an individual will succeed. The *Seashore Musical Talent Tests* predict degree of success in music; other tests for musical ability are found in the second series of Victor records, which may be used for untrained children from grade 5 up to about second year in High School; these tests include pitch, loudness, time, rhythm, timbre, and tonal memory. Another aptitude test for children of the same age is the *Stenquist Mechanical Aptitude Test*, published by the World Book Company. A. S. Lewerenz is the author of *Tests in Fundamental Abilities of Visual Art*, published by the California Test Bureau. Mechanical ability and motor skills (ages 4-16) may be tested by *Oseretsky Tests*, published by Educational Test Bureau.

Intelligence Tests and Aptitude Tests.—The important scores obtained from intelligence tests are the mental age, M.A., and the intelligence quotient. The latter is obtained by dividing the M.A. by the C.A. or chronological age. The M.A. indicates mental maturity and means that a child with an M.A. of seven years has the mental maturity of the average child with a chronological age of seven years; the I.Q. indicates the rate at which the child is maturing and is an indication of the speed at which a child can learn. Children with I.Q.'s of approximately 100 are average. A child with an I.Q. of 85 learns more slowly, all things being equal, than the child of the same age with an I.Q. of 100; and a child with an I.Q. of 115 learns easily and can complete his work in less time than the average child.

Results of intelligence tests and aptitude tests should be used only by individuals who understand the limitations of the predictions. The elementary teacher should give much more study and thought to intelligence and aptitude tests than can be allowed for in this volume. The information secured from these tests should supplement other data.

It is, for example, an accepted fact that a child with an M.A. of six and one half years has a mental readiness to begin to read with the type of materials which are available, but it must be remembered that this is no assurance that the child will master beginning reading. Many children with an M.A. of six have learned to read and some failures in reading are children with high I.Q.'s. Children in a given grade who are working up to capacity and whose I.Q.'s vary should not be expected to master identical elements or to be using the same materials. The I.Q. is a means of approximating the learner's ability to profit by the use of learning materials and activities of different levels and nature.

Other Types of Data.—Among records which furnish useful information concerning the pupil are those of his health, time spent in extracurricular activities, work at home or elsewhere in out-of-school hours, leisure pursuits and social associations, and worries. These are gathered from a variety of sources: the school records, visiting teacher, conferences with children and parents.

Evaluating Children's Interests.—Interests of children are used in motivating the work of children, in selecting units of work, in developing appreciations, and in building human relationships. Techniques which are used by teachers in ascertaining the interests of children are as follows:

1. Evaluating withdrawals of books from public library and school libraries.
2. Using questionnaire in order to detect various areas of interests, such as hobbies, favorite games, health interests.
3. Recording activities which children choose during free periods.
4. Keeping anecdotal records.

Evaluating Beginning Reading Readiness.—When the child is subjected to the complex skill of learning to read, he should meet with success, thus avoiding discouragement and failure. Means of determining this readiness are as follows:

1. Understanding home environment through home visitation and by studying records
2. Studying experiences which children have
3. Observing sentence structure and vocabulary children use on the playground, in the classroom
4. Administering reading readiness tests, several of which follow:

Name of Test	Grade	Publisher
Metropolitan Readiness	Kindergarten and 1	World Book Co.
Monroe Reading Aptitude	First grade entrants	Houghton Mifflin Co. New York
Lee-Clark Reading Readiness	Kindergarten and 1	California Test Bu- reau, Los Angeles

Evaluating Work-Study Skills.—Emphasis is being placed upon the development of work-study skills which include ability to read maps, graphs, charts, use of table of contents and the index in locating information, intelligent use of the library. Tests at the elementary school level are as follows:

Iowa Every-Pupil Tests of Basic Study Skills. Boston: Houghton Mifflin Co.
Barker. "Informal Testing of the Use of Books and Libraries," *Elementary Eng-
lish Review*, Vol. X (June, September, October, 1933), pp. 143, 274, 205.
New York Rating Scale for School Habits. Yonkers, N. Y.: World Book Co.

Evaluating Critical Thinking.—Emphasis is being placed upon critical thinking whenever the child faces a problem in reading, in arithmetic, in social studies, etc. A test on critical thinking in the social studies may be secured by writing Bureau of Publications, Teachers College, Columbia University, New York. This test checks work-study skills, abilities to draw conclusions and to apply generalizations.

Evaluating Health.—The problems of health and physical well-being are an important phase of the evaluative program. Health is related to the physical, mental, social, and emotional life of an individual and it also is an integral part of anything that affects the child during the day. The information needed in finding the health status of the child pertains to the following:

1. Family background
2. Height, weight, age
3. Condition of teeth, eyes, ears, nose, throat, heart, chest
4. History of illness and accidents
5. Immunizations, etc.
6. Physical defects
7. Rest habits and eating habits

Techniques of securing information are as follows:

1. Physical examinations administered by the school
2. Records based on examinations and observations
3. Forms filled in by parents and children
4. Nurses and teachers interviewing children and parents

5. Home visitation
6. Understanding of health problems learned by administering test. Such a test is to be found in *Social and Related Sciences*, Part III, California Test Bureau, Los Angeles, California.

Evaluating Social Adjustment.—Every learning situation contributes to the child's personal and social adjustment. It is essential that the teacher understand the hopes, the fears, the desires, the suppressions of all the children in her class. The isolation of adjustment problems is a difficult task and teachers have used various methods. The Woodworth-Mathews Personal Data Sheet, published by C. H. Stoelting Company, Chicago, is a self-descriptive scale designed for elementary school children. Improved rating scales are issued by the Winnetka Educational Press of Winnetka, Illinois. There is also the Haggerty-Olson-Wickman Behavior Rating Scale published by the World Book Company, Yonkers, New York.

It is advisable to supplement the information obtained from the scales presented in the preceding paragraph with information obtained from recorded observations and anecdotal records. Characteristics of good anecdotal records are:

1. Dating each record
2. Noting significant facts
3. Recording concrete behavior patterns
4. Noting favorable and unfavorable behavior patterns
5. Recording incident at time when incident occurred
6. Using concise statements
7. Selecting specific behavior patterns over a period of time, such as cooperation and tolerance, assuming responsibility

These records may be kept on file cards with the interpretation of the data on the back of the cards; or a loose-leaf notebook with a page for each child would be practical. Since the writing of anecdotal records consumes much time, it is suggested that notations of two or three children who are under observation and are remedial cases be made. The time and the manner in which the records are summarized are factors which will vary from one school to another.

Measure of Social Acceptance.—In recent years a simple technique has been developing for gathering very useful data relative to the number of friendships each individual has among the other members of the group. *Sociograms* not only indicate the number of friendships but also furnish data relative to the friendships pupils would like to develop. By the "guess who" technique the opinions of pupils relative to the social qualities and personalities of others may

be collected and summarized. A discussion of the construction and interpretation of sociograms is given in the following chapter.

Character and Personality Traits.—The practice of giving and recording a personality inventory is spreading. These inventories furnish rough measures of such qualities as relative seriousness, frankness, steadiness, extroversion, introversion, dominance-submission, sociability, neuroticism, persistence, and relative adjustment and maladjustment to home, school, and companions. Typical of instruments for this purpose are the following:

California Test of Personality. E. W. Tiegs, W. W. Clark, and L. P. Thorpe. California Test Bureau. Kindergarten through adult. Factors tested: self-reliance, sense of personal worth and personal freedom, belonging, freedom from withdrawal tendencies, freedom from nervous symptoms, social standing, social skills, freedom from antisocial tendencies, family relations, vocational relations, and community relations.

Vineland Social Maturity Scale. Training School at Vineland, New Jersey. Ages 0-1 to 21 years.

The Symonds Adjustment Inventory. Teachers College, Columbia University, New York City, for use in upper grades

Ratings by former teachers are also employed, as are other records of pupil behavior, which throw light on the honesty, temperament, disposition, and other important character and personality traits of the pupil. Testimony of parents frequently reveals information in this area.

Evaluating Emotional Development.—Emotions are intrinsic factors in every experience. The understanding of the nature of each child is essential in guiding him to take his place in a social world. Ways of gaining information about the child's emotional behavior patterns are as follows:

1. Studying children's ideas through their creative work, such as paintings, drawings, stories, and poems.
2. Recording projection techniques, such as how does the child treat his pet, his toys, etc.
3. Noting on anecdotal records wishes, desires, worries, tantrum patterns, etc.
4. Using Haggerty-Olson-Wickman Behavior Rating Schedules, World Book Company, Yonkers, N. Y.

Indices of Cultural and Economic Status.—Data pertaining to the out-of-school cultural and economic environment are available from such sources as records of parental occupation, usually made in the general files of information about pupils, and records of home visitation by one or more of the regular teachers or the visiting teacher.

These data may include such items as the personal education of the parents, general tone of the home, and neighborhood and church experiences.

Educational Status and Achievement.—In the large majority of schools scores on achievement tests are available in various fields. Previous marks and scores in particular subjects throw much light on the degree of background and preparation possessed by the learner.

Many teachers give to some or all their classes at the beginning of each year an inventory or placement test which reveals the degree of possession of skills and information prerequisite to success in the work of the year. Some teachers also give a preliminary test over the field to be covered with the purpose of discovering what is known at the beginning and thus learning what part of the field needs more and what needs less emphasis. If the test is repeated at the end of the year, the teacher has a measure of the learning that has taken place in whatever the test measures. Catalogues for achievement tests and diagnostic tests may be secured from the following publishing companies:

Benjamin A. Sanborn & Co., Chicago.
California Test Bureau, Los Angeles.
Educational Test Bureau, Educational Publishers, Inc., Minneapolis.
C. A. Gregory Company, Cincinnati, Ohio.
Houghton Mifflin Company, Boston.
Public School Publishing Company, Bloomington, Illinois.
World Book Company, Yonkers, New York.
Science Research Associates, Chicago, Ill.
Cooperative Test Service, New York.

Interpretation of Data.—In interpreting data it must be remembered that we are thinking of the child as a "whole." Therefore, in guiding and directing the "whole child" it is essential that all data be brought together. It may be necessary to isolate factors in order to detect those which are influencing others, but each is evaluated and interpreted in terms of the whole child. Evaluative measures are of value only as they guide teachers, parents, and children in studying the behavior patterns of each individual, in finding causes for the behavior patterns, and in providing preventive measures and remedial measures. Information may be interpreted by teachers as individuals, by committees of teachers, by special teachers such as nurses, by staff, by teachers and parents, by teachers and children, by teachers, children, and parents. The type of problem, the policy of the school, the community, all are factors that function in determining the procedure to be followed in the interpretation of data.

QUESTIONS, PROBLEMS, AND EXERCISES

1. Explain why it is desirable to change the emphasis from measurement of learning to evaluation of learning.
2. Prepare a ten-minute talk on "The place tests and measurements in an evaluation program of learning."
3. Why it is important to evaluate growth in attitudes, appreciations, and social adjustment?
4. Clarify the following terms: educational age, intelligence quotient, chronological age, grade score, norm, reading age, educational age.
5. Prepare a five-minute talk on "The weaknesses of an intelligence test."
6. Select a good standardized achievement test at the primary level or the intermediate grade level. Give the test and interpret the results.
7. Outline a thorough medical inspection program for elementary school children.
8. Examine recent newspapers and magazines to determine the emphasis given to health topics.
9. Make a survey of available health agencies in your community in order to locate particular agencies.

Chapter 19

GUIDING AND TEACHING THE INDIVIDUAL

Learning is an individual matter. Although an instructor may "teach" a class, the learning is done by the individual. Beyond the minds of the separate individuals in the group, there is no class mind capable of learning. The teacher should not make the mistake of assuming that all, or any two, individuals in the class learn alike from the same instructional materials or instructional activities. It is unfortunate that there is not a better device by means of which teachers can see in detail the variety of learnings, with respect to both nature and amount, that take place among twenty or thirty children in a class who have had practically identical stimuli.

The teacher, therefore, must focus her attention upon the learning actually taking place in the individual child rather than upon her teaching materials and activities. She must not only concentrate upon the individual, but as a means to produce the desired growth and learnings she must acquire a great deal of knowledge about each individual child, his capacities, interests, and background.

Learning activities and materials which are not organized to the needs, interests, and experiences of children will frustrate and discourage some children while other children will not work up to their capacities. A curriculum that is not flexible and that cannot be adjusted to the needs of children will cause children to be frustrated, discouraged, and uninterested in school.

1. IMPORTANT INDIVIDUAL DIFFERENCES

It is a known fact that in every age level differences within groups of children must be constantly taken into consideration in directing learning. Children differ from each other intellectually, physically, socially, and emotionally: some learn slowly, others quickly; some are of small stature, others are large for their age; some are leaders in their groups, others are lonely; some are happy and learn by failures, others are nervous and unstable whenever they face a problem. Children not only differ from each other, but they have different relative levels of aptitude and achievement. A child with a high I.Q. may

be average in reading, do superior work in social studies, do poorly in art, and produce a monotone in singing; while another child with the same I.Q. may do well in reading, do poorly in social studies, average work in music and art, and be a very superior basketball player.

Since each child is a unique individual, the needs of each must be met in a way which fits each individual case. Therefore, it is the teacher's responsibility to understand the needs, interests, and capacities of each child so that she may intelligently provide for these needs in the most economical and effective way. In the two subsequent chapters, ways of locating, recording, and reporting needs will be discussed. By reviewing, analyzing, and evaluating the information on cumulative records, anecdotal records, sociograms, the teacher can discover the status of the child in each of the various areas of growth and development. Areas within which children vary will be presented in the following paragraphs.

Intelligence.—The range in mental age among children in any single elementary class is usually four or five years in the primary grades and six or seven years in grades 7 and 8. In a second grade, the mental age will vary approximately from five years to ten years. In a typical fifth-grade class the mental age of students varies from less than the average M.A. of a typical third-grade class to more than the average M.A. of a typical seventh grade.

Children with less intelligence learn more slowly, need a great amount of meaningful practice, more time in moving from one type of learning to another, and are not able to work with abstractions. Children with a large I.Q. usually have a good attention span, learn quickly, need less practice and less time to complete their work, can generalize and work with abstractions. A child with an I.Q. below 80 will find it difficult, probably impossible, to do much of the work that a child with an average I.Q. of 100 can do, while a child with an I.Q. of 125 would probably be bored with the same assignment.

Aptitudes.—It is very interesting to note the abilities by means of which children gain their status in a group. Several children are potential leaders in free play periods. Another child may add interest to group work by means of contributions in drawing. A child who is a musician is held in esteem because she can calm and quiet the room by playing on the piano or the violin. A boy of nine who had no friends, and who was so slow that the children often were irritated with him, won a place of honor by building bird houses. Recognition

of some abilities on the part of each child make for effectiveness in an educational program.

Children also vary significantly in their capacities or aptitudes for learning of various types. This is particularly true with respect to aptitudes for art, music, mechanical skills, and sports. Much of what is assumed to be a difference in specific aptitude is in large part the result of differences in attitude, interest, and previous preparation; for practical purposes of learning, the differences are very significant whatever their cause.

Physical.—It is obvious to every one that children vary in height, weight, and muscular coordination. Many physical handicaps also are very obvious, such as the child who needs braces and crutches in order to be able to walk and the child who wears heavy lenses in order to be able to see. Children with asthmatic conditions and cardiac conditions cannot play vigorously. Infections because of decayed teeth and diseased tonsils lower the child's efficiency. Some children tire easily and are not interested in activities while others are very energetic and eager to be doing something.

Social and Emotional Adjustments.—Social and emotional adjustments are closely related. Some children are reticent, and others boisterous, some timid and others bold, some responsible and others irresponsible, and some cooperative and others not so, some are dependent and others independent, some are irritable and others poised, some are cheerful and others depressed, some sensitive and others much less so, some suggestible and others negativistic.

Patterns of social and emotional behavior are not static, but may vary within an hour or two. In one situation and with a certain group of children a child will be happy and cooperative, whereas with another group the same child may be annoying and boisterous. At home some children are dependent and at school self-sufficient. As environmental conditions affect children differently at different times so will their patterns of behavior differ.

As the result of difficulty of learning in elementary grades, junior high school students may by the time they reach junior high school have developed attitudes of fear, insecurity, and dislikes for certain fields of school learning, and some have a dislike for all fields. Others, probably because of much happier experiences, have developed feelings of interest, confidence, and belief in the value of learning.

Home Background.—Children differ greatly in their cultural backgrounds and attitudes as influenced by the home. Children come

from homes which may be characterized by the following factors: poverty, with or without culture; wealth, with or without culture; estranged parents; compatible parents; one parent at home, both parents working, dull child in a family of bright children and vice versa. Some homes create fears, others aid children in facing realities of life. Because of varied home backgrounds and varied experiences in the homes children will vary in their interests, attitudes, appreciations, understandings of economic and social concepts, speaking vocabulary, and in their abilities to convey their ideas to others. They will react very differently to the same situation. They are sensitive to different things.

Homes differ greatly in their intellectual and cultural interests and tastes, in modes of thinking, in language and speech habits and standards, in patterns of cooperation and regard for others, in facilities for home study and in other ways very significant for learning and behavior at school.

Academic Achievements.—The chronological age of children enrolled in the first grade has a range of about one and a half years, growing and maturing rapidly at this age level. Every month in chronological age makes a great difference in maturity; therefore, there will be a great range in the maturity levels of the children. In the first grade curriculum emphasis is placed upon the development of reading skills. Those children who do not have a mental age of six years will constitute a group that should have a curriculum especially arranged to fit their needs; to place them with those children who are ready to read would only mean failure.

The range of pupil status in subject matter achievement in any grade is usually four or five years. For example, in arithmetic the scores in problem solving in fifth grade may range from third grade level to seventh grade level which means that some children will be doing as well with the materials as an average third grade child would do and some as well as an average seventh grade child would do. The rate of speed at which children work will also vary significantly; some children will work ten problems in thirty minutes while others will solve only four in the same time period. A reading assignment will be read and comprehended by one child in fifteen minutes while another child will devote thirty minutes to the same selection and probably not understand what has been read. One child can communicate his ideas to others by means of written themes and reports very effectively while another child finds it very difficult to use that medium of expression.

Partly as the result of differences in general capacity to learn and in specific aptitudes and attitudes in a particular field, learners have widely different backgrounds in that field. Particularly in English classes in the upper grades some children have much better than average foundation in vocabulary, grammar, and language, and much more advanced interests in literature. In ability to read, differences have become so great as to call for the establishment of special classes for those with least ability. Variability of similar importance for learning exists in all other fields, particularly mathematics.

Interests and Industry.—Not only will learning depend upon the degree of interest in learning and in learning activities, but as a matter of fact the degree to which the learner will participate in learning activities depends upon the degree of his interest in the particular area. Interests depend largely upon the extent, pattern, and character of previous experiences. They depend upon the nature and pattern of interests of parents, of other adults known to the learner, and of his companions. While it is among the most important services and responsibilities of the teacher to develop desired interests—that is, in good literature, in physical and mental health, and in other peoples of the world—she must also recognize the pattern of interests in the individual learner as it exists at the time and adapt instruction somewhat to it, harnessing those interests in order to insure wholehearted, effective participation in learning activities.

Information Concerning Learning Capacities.—In the large majority of schools tests of general mental ability are given and results are recorded for each individual. As a measure of brightness the intelligence quotient is a useful but not infallible measure. If more than one I.Q. is recorded, it is wise to rely upon a figure slightly in excess of the average of those recorded. This higher figure is more likely to represent the individual's capacity than the exact average or the score on any one test.

The mental age is a measure of general mental *ability*. It increases with age in proportion to the I.Q. The I.Q. is a measure of general mental *aptitude or capacity* of the learner, especially in subjects involving vocabulary and verbal learning. The mental age is the best single measure. It should be modified slightly up or down by taking into consideration the degree of difference between the I.Q. and 100. For example, of two learners, each with a mental age of 15.5, the one with an I.Q. of 115 may be expected to do better work, especially in dealing with abstract and verbal material, than another with an I.Q. of 95. If the test was not given recently, it should be remembered

that those with higher I.Q.'s will have increased proportionately in mental age.

In many schools tests of special aptitude are given and the scores are available. Aptitude tests in mathematics are especially useful. Care must be exercised in interpretation of these scores. The best single basis on which to forecast what a learner will actually do in a subject is his previous school marks. In addition to capacity, they measure in a rough way the factors which generally make for achievement, such as interest, industry, promptness, and cooperation.

Information Concerning Interests.—Data relative to interests may be available from a number of sources: interest inventories, records of hobbies, extracurricular activities, participation in out-of-school experiences, of statements made in class, library cards, and questionnaires prepared by teachers. In an increasing number of schools individual teachers or groups of teachers are preparing interest inventories in the form of check lists or questionnaires to be filled out by pupils in the upper grades or filled out by the teachers on the basis of showing of hands as the teacher reads each item.

Other Pupil Data.—Many other types of data are very valuable in guiding and teaching the individual—data concerning his home environment, his character and personality, his social adjustment, etc. (See Chapter 18 for discussion of means of obtaining data of these types.)

2. ADAPTING TO THE INDIVIDUAL

Schools are accepting the responsibility for fitting the school program to the many needs of children. Children who are challenged with a task that is neither too difficult nor too easy have good mental health and continue attacking problems which must be solved. Methods which have proved to be successful in providing for individual differences will be presented in the following paragraphs.

Physical Deviates.—Crippled children should be educated with normal children if at all possible, and should be placed in play groups where they can participate without being embarrassed. They must be guided in learning to minimize their handicaps and to put forth effort to be as independent as possible. At a time when the afflicted child is not in the classroom his handicaps should be explained to his classmates; this often changes a critical attitude to sympathetic understanding. Usually children are very sympathetic and very eager to help handicapped children. Children with certain types of serious

physical disabilities should be placed under the direction of a specially trained teacher and given special treatment, which in many cases involves appropriate types of physical and mental therapy.

Children who are hard of hearing must learn to live in a hearing world and those who can hear must learn something about the problems of handicapped individuals. Children who are hard of hearing should be seated so that they can hear what is being said and so that they can see the face of the person who is speaking. The teacher and children should pronounce and enunciate words clearly, and, if the child does not understand, the speaker should repeat in a courteous manner.

Children with poor vision should be seated where they can see what is written on the board and also all materials that are being displayed for observational purposes. Their reading materials should be printed in large type on nonglazed paper. For children with severe visual handicaps some schools have special sight-saving classes. Children with lowered visual acuity also must be guided through socializing experiences to capitalize on their potentialities and thus make a contribution to society.

Speech.—Speech is a basic tool in gaining status in a group. A child with a speech difficulty, such as stuttering, lisping, infantile speech, sound omissions and substitutions, often is silent because of the unfavorable reactions of other children. No child should ever be permitted to giggle at the handicapped child, neither should a teacher persist in asking a stutterer to keep repeating that which the teacher cannot understand. To do so only increases the child's anxiety and frustration. The child should be permitted to make his needs known without fear or embarrassment.

It is the responsibility of every teacher to understand speech difficulties of young children and to provide guidance in speech correction. In many schools a specialist in speech education is provided to whom stutterers, cleft palate cases, and others suffering from speech defects may be sent for special treatment.

Social Adjustments.—Social adjustment often implies gaining status in a group, which means that a child must make a contribution and must cooperate in a democratic way. It is very difficult to group children socially, as their needs of today may not be the needs of tomorrow. In organizing groups and committees teachers should use the information secured from sociograms, observations, and interviews. For example, the child who has no friends should be placed with a group of friendly children. The child who needs recognition

and has a talent in drawing could be assigned to direct a group working on a frieze. Often a teacher can help children make adjustments by discussing with them the customs of various groups and the way in which to conduct themselves on different occasions and in strange places, such as during interviews, in public buildings, etc.

Exceptional Children.—In recent years it has been realized that bright and dull children differ not only in quantity but also in quality of ability, and that they should be taught differently.

The Bright Learner. The progress of civilization depends largely upon the contributions of genius. The work of one Edison, of one Pasteur, of one Madame Curie, of one Franklin, of one Shakespeare is of more consequence to civilization than the efforts of thousands of persons of average ability. The loss to society and to civilization because of our failure to develop fully the capacities of the ablest children is incalculable.

As the result of classroom experiences with bright children, we are able to characterize them for the purposes of teaching. The bright child possesses greater energy and more curiosity; is sociable, active, more capable of dealing with abstractions, perceives relationships more clearly and quickly, prefers to work under his own planning and initiative, likes to explore new and more advanced areas, becomes bored more quickly with simple routine tasks, learns mechanical processes much more quickly than an average child, dislikes tasks he does not understand, dislikes rote memorization though he is superior at it, has confidence in his own abilities, appears lazy if given uninteresting things to do, is likely to seek short cuts, and possesses a wide range of worthy interests.

The bright learner should not only have more work to do, but it should be of a type to challenge his superior and special abilities. He should be required to locate and to organize materials, to find and state relationships and generalizations, to read more difficult material. He should be relieved of some of the easier routine tasks which may be necessary for the average or below-average child. He should be given larger units, tasks and problems with a greater number of steps. He should be freed of some of the drill of the class and permitted to work more on his own. He should be stimulated to undertake imaginative and creative tasks. For him, frequent diagnostic testing is unnecessary; he can be trained for self-diagnosis and self-planning of remedial work. The brighter the child is, the more these suggestions should be employed and the further they should be carried. They usually apply to children with an I.Q. of more than

120 to 125. Those of definitely higher I.Q. (140 and up) should be treated as special individual cases.

The Dull Learner. Until recent years the child with an I.Q. of 90 or less rarely continued in school beyond the ninth grade, and those with an I.Q. of less than 80 rarely progressed beyond the sixth grade.

The dull child usually possesses to some degree most of the following characteristics which need to be held constantly in mind while teaching him. In comparison with the child of higher I.Q.,

1. He learns in shorter steps or units.
2. He needs more frequent checkups on his progress and more remedial work.
3. His vocabulary is more limited and less precise.
4. He needs to have many new words made very clear in meaning.
5. He does not see relative generalizations or meanings as readily.
6. He has less creative ability and less ability to plan for himself.
7. He is slightly slower in acquiring complicated mechanical and motor skills.
8. In proportion to his dullness he tires less quickly of mechanical routine tasks and he tires more quickly of difficult reading or abstract discussion.
9. He is quick to generalize crudely, is lacking in self-criticism, and is easily satisfied with superficial answers.
10. He is less envious.
11. He has had unhappy experiences with previous school work and is hence more likely to be irritable in class, lacking in self-confidence, and more interested in nonschool life.
12. He is more susceptible to the suggestions of other persons.
13. His difficulties are cumulative in learning.
14. He has a narrow range of interests.
15. He possesses a slow reaction time.
16. He tends to engage in overcompensating activities.
17. He is less able to see the end results of his actions. Remote, long-range goals are not impelling to him.
18. He fails to detect identical elements in different types of situations.
19. His attention span is short and must be reinforced by engaging appeal.
20. He especially needs evidence of his progress.

The more practical and successful methods of teaching slow or 'dull learners grow in large part out of the characteristics listed in the foregoing. Teaching the slow learner, like teaching the bright ones,

calls for special planning. The following suggestions are recommended:

1. Present new materials by associating them and explaining them in terms of simple familiar materials.
2. Keep the dull learner conscious of progress at all times. He must be given reason to believe he is succeeding.
3. Use real visual objects and other concrete and lifelike aids whenever practical.
4. Employ applications to life, not only to bridge the gap between school and life but also to promote understanding.
5. Make an effort to discover special interests on the part of individual learners and to utilize them if possible by applying learning activities to these interests.
6. Make daily assignments involving specific, meaningful tasks, most effective with the dull.
7. Be satisfied with attempting what is possible and take time to teach that little well.
8. Explore constantly to discover misunderstanding and relatively poor learning. Do remedial teaching on the spot, but do not be too critical.
9. Avoid an excessive vocabulary load. Use simple and familiar words and simple sentences. Use words in their exact and precise meanings.
10. Encourage dull children by letting them explain, but do not confuse others by too many poor explanations.
11. Train the dull children to read better. Take more time for oral reading in order to develop comprehension and vocabulary.
12. Make a special effort to see that the child understands adequately new concepts that are essential to meaning and that will come up later. Write them on the blackboard and give concrete examples.
13. Avoid giving the dull child, merely to keep him busy, meaningless routine tasks from which little progress in learning can be expected.
14. Avoid sarcasm or frequent criticism. Always encourage dull children who try.
15. Do not be irritated by symptoms of lack of interest, tension, discouragement, or mild disorder in the dull child. These are natural symptoms of continued unsatisfying experiences resulting from being forced to attempt more than ability justifies. They diminish as the dull children are given learning activities that are appropriate to their capacities, abilities, and interests.
16. Remember that it is very important that the dull child like and have confidence in his teacher.
17. Take care to provide reading material of easy vocabulary and with

sentence structure and content suited to the child's age level, interests, and experiences.

18. Remember that dull children often have less cultural opportunity at home, parents with less education, less reading material at home, and in general poorer background for learning.

The teacher must remember that school is particularly dull and unexciting to the dull child compared to the out-of-school activities which make up his life. To recapitulate, the teacher should observe the following principles :

1. Be content to attempt less and make sure of better learning of what is attempted.
2. Employ practical, concrete, lifelike materials and learning activities.
3. Be sure that the child understands as he goes along.
4. Be patient and encouraging in word and in manner.
5. Provide more repetition, required for the slow learner

Grouping.—Experience has shown that in providing for individual differences in learning experiences based on tool subjects and content materials there is no one way that is the best way. The remedy which will fit one school will not be practical in another community. One factor cannot be isolated from all other factors. If children are grouped according to mental age, for example, it is found that they vary in regard to experiential background, social adjustment, and in achievement; if they are grouped according to chronological age they vary in mental age, social adjustment, experiential background, and emotional maturity. In grouping children all factors must be taken into consideration and the need of the child must be the guide in determining the group into which the child should be placed.

Grouping in the Lower Grades.—In a first grade, beginning reading class, children are grouped according to their readiness for reading. Those children who are immature are placed in a group in which they will listen to stories, tell stories, talk about experiences, go on observational trips, etc. Another group that is more advanced in readiness will construct reading or experience charts (under the direction of the teacher) based on their experience or working in readiness workbooks. The third group is made up of those children who are ready to begin work in the preprimer.

In all grades children are regrouped for various learning experiences. For example, in the fourth grade a child may be working with a group that is doing remedial work in arithmetic, and in reading with a group that is reading independently. All grouping must be flexible,

thus making it possible for the children to be placed at any time with the group that is working on problems which fit their particular needs and their maturity level. Advantages that may be advanced in favor of grouping are—

1. The group plan provides better for very important educational outcomes, such as skill and habits of cooperation, skill in oral discussion, development of ideals from social situations, and other social attitudes, ideals, skills, and habits necessary as training for cooperation. These may be developed much better in class group teaching than where individual instruction is used.
2. Group contacts give mutual stimulus to activity which is not possible under the individual plan.
3. The group plan stimulates effort through discovery of problems and the development of interest in the group discussion.
4. The group plan is valuable because of the opportunity for the slow to learn from the discussions of others.
5. The group plan makes unnecessary duplicate explanations, as under the group organization plan one explanation or set of instructions serves for all.

Grouping in the Upper Grades.—In the upper grades in school, in which the upper 13 or 20 per cent of a given class (let us say English 7A) includes enough pupils to form a special section of bright and one of slow pupils, ability grouping can be used with definite success. While general agreement is lacking and it is impossible to draw precise conclusions from experiments in which learners are using different subject-matter materials, the consensus of scores of investigations is that results are improved when ability grouping is employed intelligently (as far as results that can be measured on tests are concerned), even though instruction was not adapted to the group as well as it could be in more than a few of these experiments. Unless great care and intelligence are used to adapt instruction to the differentiated group, it may not be very wise procedure.

Whenever adaptation is used, care must be taken to keep at a minimum the stigma attached to being in the slow group. When pains are taken to avoid stigmatizing the slow group, the ill effects of grouping are probably materially less than in conventional heterogeneous classes in which the slow learner cannot hope to excel and is daily faced with competition with which he can hardly fail to contrast himself even if his teachers do not do so openly.

In an increasing number of upper elementary grades, review sections are being formed in the seventh grade in arithmetic and reading, reviewing if necessary fourth-grade materials.

Even when ability grouping is employed, there is still very great opportunity for adaptation and differentiation of materials and methods with regard to individual students with the slow, the average, and the bright class.

A study by the research division of the National Education Association revealed that forming separate classes for slow-learning pupils has already become a fairly widespread practice in the upper grades, especially in English, mathematics, and the social studies. This practice is most widespread in junior high schools.

Pupils who should be placed in slow-learning classes may be best identified by means of a combination of three of or all the following criteria: (1) general intelligence test, (2) average mark in all subjects in previous year or two, (3) average mark made in previous year in subject involved, and (4) objective test covering the field concerned as taught in the previous year or two. The greatest care must always be employed to cause both bright and slow to forget that they are in special sections.

Obviously it is not practical to use the same subject matter or the same materials for all pupils regardless of interest, capacity, ability, or background. Various plans are employed for adaptation of subject matter and learning activities, and a number of these will be considered.

Independent Work Period.—Children who are working independently must be employed with carefully planned constructive activities which vary from day to day. Workbooks, worksheets, reading independently, creative work with clay, painting, etc., are used frequently in the primary grades. In the intermediate grades children may work on individual difficulties in spelling or arithmetic; prepare special reports; or work on special committees, such as arranging the bulletin board, preparing a dramatization for literature class.

Directed Individualized Period.—The directed individualized period may be a reading period in which each child is reading in a different book. Children may be doing different things in arithmetic or language, according to their individual needs. It may be a work period in social studies and each child (or probably groups of children in committees) is working on the same problem by attacking it in different ways, although they may be working on individual problems. Advantages of a directed individualized work period are .

1. The teacher has the opportunity to gather information which will furnish a basis for diagnosis and individual treatment.

2. It is possible to adapt the problem much better to the needs of the slower and the abler children alike.
3. The opportunity for personal help and conversation free from the formality of the group work period and the possibility of privacy in relationships with children may both be used to excellent advantage by a clever teacher to adapt criticism and approval, encouragement and rebuke, to the individual nature of the child without assuming before the other children the role of one who varies standards. All the special advantages that attend private talks in these connections are available to the teacher.
4. The teacher can more easily pierce the defense of sophistication and indifference assumed by many children in the presence of a group of their classmates, which weakens during personal and informal contacts.
5. An opportunity is afforded to give individual help to children on difficulties peculiar to them not only in the case of the slow but also of the average and brighter children, and also to children whose difficulties are the result of absence or the fact that they are transfers; likewise there is opportunity to give needed training in how to study.
6. The opportunity is offered to check up on the child's progress, locate weak spots, analyze difficulties, and offer individual suggestions for remedial work.
7. There is the opportunity to arouse interest by encouragement, by raising questions, and by arousing curiosity, by the sheer personality and personal influence of the teacher.

Individualized Instruction.—In the last half century various types of *individualized* instruction have been employed. In its extreme form, each individual is given his assignments, his instructions, and his evaluation as an individual. As commonly utilized there is at least some group work; either the class as a whole or a small group in it is given group instruction and assignments occasionally, and group tests are employed.

In some schools each pupil moves at his own rate over the same ground as the others, completing a year's work in a subject in six months, eight months, or a year and a half as the case may be. The more important advantages claimed for individual instruction are:

1. It allows the slow child to progress at his own rate, thus permitting thoroughness and avoiding discouragement.
2. It prevents the illusion of making progress when it is not really made, which misleads so many slow, uninterested, or indolent children under group discussion.
3. It tends to concentrate the attention of the children on their own

individual achievements, upon which their progress through the course of study depends, instead of upon the average progress of the class.

4. It tends to focus attention upon the mastery of subject matter and upon educational growth, and away from satisfying demands imposed by the teacher.
5. It permits the more able child to make progress at his optimum rate and thereby realize the possibilities of his peculiar gifts.
6. It tends to eliminate that training undesirable for the gifted child which results from his being held down to the pace of the average and which sometimes generates habits of idleness and attitudes of satisfaction with achievement that is less than capacity.
7. It brings about personal contacts between child and teacher, for which the "child-tutor" situations are much more favorable than "teacher-class" situations.
8. It permits valuable exercise of individual initiative, especially on the part of the more capable child who now is supervised as closely as the slow or mediocre one.
9. It tends to reduce retardation and to prevent the elimination of the slower children.

The Activity Unit.—The program of the activity unit can be adapted very easily to individual differences. Reading materials, such as books, magazines, bulletins, folders, and the like having a unit range from very easy to difficult are made available to the children. Children report their information to committees or to the group; by asking the slow child to report first and by requesting those who add further information not to repeat what has been said, the bright child must listen to the slow child in order to know what has been said. Provision also is made for individual instruction in the development of skills in the tool subjects. If five children are ready to learn how to interpret information represented by means of a graph, those children are given information pertaining to the graph. If all the children in a group are ready to learn how to make an outline for a report, the whole class works on the problem.

In activity programs, children also have an opportunity to develop their creative ability through the media of clay, paints, drawing, and construction. In a unit on birds, for example, one child who was interested in building bird houses learned to appreciate the fact that houses differing in construction and size were needed for different birds, the result being that number concepts took on meaning and significance.

The informal discussion periods, committee work, and excursions help children in making adjustments, in understanding the worth of

an individual, in appreciating the fact that through cooperation much can be accomplished. Every child has an opportunity to have status in some group, in experiencing success, and in receiving praise. As is obvious, however, the use of very much the same educational material for all children leaves much to be desired in providing for the variations between individuals.

Cycle Plans.—A variety of plans in the organization of primary units offers many possibilities to provide for the needs of children. In these plans, all grade lines are abandoned and all learning is continuous, which makes it possible for the child to move at his own speed. In one plan teachers remain with the same group of children for three years. In some schools the children remain in the same room for three years, the furniture being adjusted from time to time to fit the children as they mature; whereas, in other schools, teachers and children move into another room as the children mature. Another plan is organized in such a way that each teacher teaches at a certain level, and children move from one teacher to the next as they advance in their work.

At Oak Park, Illinois, a two-year cycle plan extending through the six elementary grades has been followed for approximately fifteen years. According to this plan, children have three teachers as they progress through six years of schooling. Advantages of the cycle plans are:

1. Children experience success as a result of progressing at their own rate.
2. All growth is continuous.
3. Time intervals of promotion are eliminated.
4. Children may be advanced from one group to another group at any time.
5. Time is gained at the beginning of each school year since the teacher knows the children and does not need to give inventory tests to find their level of accomplishment.
6. Children are grouped according to maturity and compatibility.
7. Each teacher has an opportunity to learn to know each child.
8. Each teacher has time to learn to know the parents and to develop good human relationships.
9. The teacher has a better opportunity to evaluate her own techniques of teaching.
10. The plan is very adaptable for activity units, group work, and individual instruction.

Differentiated and Flexible Assignments.—In every ungrouped class of a score or more children there will be found a few who can

learn very much more difficult material and can learn much more rapidly than the remainder of the class. There also will be in a typical class some children who cannot acquire certain learnings rapidly. A great many teachers are employing differentiated and flexible assignments effectively in ungrouped classes. The major difference between the two assignments is that the differentiated assignment is modified in quantity and nature of work covered for high, average, and slow children, whereas in the flexible assignment the assignment is not divided into levels, but activities or learnings varied with respect to difficulties and amounts are provided and each child is encouraged to do as much as he can in terms of his abilities and the time available beyond a designated minimum amount of work.

No single pattern can indicate the many desirable possibilities encompassed by these assignment plans. The impetus for learning generated by various assignments may certainly be profitably used, especially under the direction of a teacher who keeps foremost in mind the real purposes of education. The following examples of differentiated and flexible assignments are given not as ideal examples but as typical ones.

Differentiated and flexible assignments are used by every teacher who is providing effectively for the needs and interests of children. A teacher who paces the teaching of information and development of skills and abilities needed in learning to the needs and interests of children uses flexible or differentiated assignments. For example, a list of fifteen words is usually the spelling assignment for a week. In a heterogeneous group, some children will be working on fifteen words, other children will be assigned ten or twelve words, and a few may be given six or seven words only. In a flexible assignment a certain number of words would be required of all children and those children who have time to learn more words would work on those which they are interested in learning to spell.

The practice writing periods usually are flexible; children work on their own difficulties, found in their written work. Assignments in work-type reading periods may be differentiated and/or flexible, the determining factor being objectives for the period, needs and interests of children, and materials used.

A Differentiated Unit in Natural Science—Three Levels

Assignment: Weather and Climate

"A" Activities: Complete activities one, two, three, four, and five.

"B" Activities: Complete activities one, two, three, and four.

"C" Activities: Complete activities, one, two, and three.

Activity One

For help in solving this problem read in *The Wonderworld of Science* by Warren Knox and others, pp. 43-47.

Activity Two

Be prepared to discuss in class the following problems :

1. The sources of warm air mass and cold air mass.
2. Characteristics of a mass of cold air and a mass of warm air at a "front."
3. How a cloud is formed; hail.
4. Causes of whirlwinds, hurricanes, dust storms.
5. The effect of the natural features of the land on the climate of different regions in our hemisphere.
6. Read the newspaper and listen to the radio in order to note the development of unusual weather conditions.

Activity Three

1. Describe the instruments which are used in measuring temperature, air pressure, moisture in the air, and speed of the wind
2. Discuss ways of forecasting weather without the use of instruments.
3. Be prepared to discuss characteristics of different kinds of clouds.
4. Keep a daily record of the weather for a week.

Activity Four

Prepare a ten-minute talk on "How animals protect themselves against weather."

Activity Five

Prepare a ten-minute talk on "Values of weather forecasting."

A Flexible Assignment for Science

Topic: The World of Sound Science.

Directions: Activities in Group *one* are to be worked by all members in the class. If you are interested and there is time available to pursue another problem, choose any problem in Group *two*. For help in solving the following problems read in *The Wonderworld of Science* by Warren Knox and others, pp. 129-156.

Group One

Be prepared to discuss in class the following problems:

1. Explain the principle of sound that is basic in the following situations:
 - a. Sound following thunder.
 - b. Musical tones obtained from flower pots of different sizes suspended by strings.
 - c. Tones obtained by striking a triangle.
2. What causes an echo?
3. Discuss ways in which high-frequency sounds are being used.

4. Make a list of sounds which you heard on your way to school and tell what vibrated in each case,
5. Prepare a report on "How sounds travel."

Group Two

1. Tune a set of drinking glasses with water to the scale; then learn to play a tune on the glasses
2. Make a violin by using a cigar box and explain to the class what is vibrating
3. Prepare a report on topic, "How sounds are heard."

3. DIAGNOSTIC AND REMEDIAL PROCEDURES

Brueckner and Melby, Buswell, and others have demonstrated repeatedly the effectiveness of diagnostic study of the individual's learning program and the use of individualized remedial materials and methods. In view of the common practice of promoting children a grade a year regardless of achievement or status and in view of the fact that courses of study and curriculum are based on grade standards, the necessity for diagnostic remedial procedures has become much greater.

Types of Diagnostic Procedures.—As Brueckner¹ has pointed out, the methods of diagnosis available to the teacher tend to fall into six categories:

1. Observation of the child at his daily work, noting his study habits and procedures, attitudes toward school and school work, interests, and motivations.
2. Supplementary analysis of various characteristics of the child's written work.
3. Supplementary analysis of the child's response and reactions.
4. The use of objective, analytical diagnostic devices proposed especially to bring into relief weakness in critical problems, including such devices as diagnostic charts of errors in arithmetic and spelling, language standard progress tests, study habit inventories, diagnostic inventories prepared by the teacher for specific units of study, sociograms.
5. Interviews with the child's parents.
6. Laboratory procedures, including the use of such instruments as the kymograph, tachistoscope, motion picture camera, dictaphone, and records.

It is obvious that diagnosis should be made in the light of all available child data, including I.Q., M.A., out-of-school activities, home conditions, health, and interests. In the *Thirty-fourth Yearbook of the National Society for the Study of Education*, which was devoted to the subject of educational diagnosis, several chapters were

¹L. J. Brueckner, "Techniques of Diagnosis," *Thirty-fourth Yearbook of the National Society for the Study of Education*, Chs VII-VIII.

given to diagnosis in the subject fields of reading, English, arithmetic, social studies, science, health education, speech, art, and music. Each elementary school teacher should read at least several of the chapters.

Standardized diagnostic tests are aids in checking on common difficulties. In order to discover the specific difficulties, it is essential that the teacher construct tests based on classwork and observe the child at work. Often textbooks provide tests with the suggested remedial procedures.

Remedial Programs.—Remedial programs should be based on such principles of good teaching procedures as the following :

1. The child must be aware of the fact that improvement is needed.
2. The child must understand the need for remedial work.
3. The child must be interested in wanting to improve.
4. The child must assume the responsibility to do something about it.
5. The child must know what the correct pattern of response must be.
6. The child must know how to go about making the needed correction.
7. The child must experience improvement.

Any teacher can, by studying remedial procedures and applying these techniques intelligently, improve her techniques of remedial teaching.

The means of discovering needs, interests, and abilities of children, the records which are used to discover the status of the child, the evaluation measures used in order to discover causes, the devices used in helping the child make adjustments are only means to be used by the teacher in her program of guidance. If the teacher does not understand how to use these tools, if she is not sympathetic and understanding with the learner who needs guidance, if she is not willing to give time and effort to the cause, no program will be effective.

Reading.—The improvement of reading is a lifetime process. In the elementary grades children are introduced to the skills and abilities which they use at that level and in order to read intelligently as they advance, the same skills and abilities must be expanded in the light of the reading problems which they will meet at the next level of accomplishment. Children who are mature in reading and who have initiative to work out their own reading problems should be permitted to work independently, to do their own research, and to report their progress frequently to their teacher.

As a rule retarded readers are over age. Characteristics of reading

materials for these children are as follows: (1) material must be simple and easy; (2) vocabulary must be simple; (3) conversational style is preferred; (4) reading material must have action and suspense; (5) material must be related to their experiences, with a minimum amount of description.

Pupils in upper grades who are retarded in reading need guidance which may be provided by a special reading teacher who meets the children daily in a special room, often called the "opportunity room." Some children require three weeks of special help, others three months or more.

4. GUIDANCE BY THE ELEMENTARY SCHOOL TEACHER

Areas of Guidance.—This volume is devoted to *teaching* in the elementary school. It is exceedingly difficult to draw a line of division, if indeed that is possible, between teaching and guidance. If children are to grow most completely, healthily, and happily, they need to have many individual conferences with their teachers and much counsel and comfort as they face problems of adjusting to their environment. On many of these problems, a great many of the pupils find the help that they receive at home is not sufficient and needs to be supplemented by school guidance and counselling.

Among the areas of such problems are the following: (1) social relations with other youngsters; (2) health habits; (3) temperament weaknesses; (4) character traits and behavior based upon them; (5) discouragement with progress in school subjects; (6) discouragement in extracurricular activities, sports, games, parties, etc.; (7) problems growing out of conflicts and worries related to sex; (8) problems growing out of conflicts and worries in the field of religion; (9) problems and worries growing out of home situations.

Fundamental Principles.—In counselling the teacher should always bear in mind certain important principles considered essential in modern guidance. For a complete discussion of them one should consult at least one of the standard general books on guidance.

Among the principles upon which there seems to be agreement among a good majority of those well informed in guidance and counselling in the schools three very important ones merit discussion here. Guidance does not mean giving pupils answers to all their questions. In some instances information is available and seems to be called for by the nature of the problem of the youngster. In many other instances there is not a ready answer, and there is not under any circumstances an answer which can be definite or have any considerable

degree of validity for the particular problem. Many problems have such a nature that it will take a great deal of time for their solution; for some, passage of time is the only solution. There are many problems for which there can be no definite answer or solution under the control of the teacher and the youngster. Such circumstances call for encouragement and development of faith that eventually things will work out all right. In many situations the great problem to be solved is not the specific problem that is bothering the youngster, but the problem of being able to meet the bad situation without too much worry and damage to his personality.

The second important principle is that in many instances the teacher will need the assistance of others. She may wish to confer with parents, or have the child carry certain of the problems back to his parents for discussion; it may be that one or both of the parents, the teacher, and the pupil may need to confer about the problem. There are, of course, some problems which the youngsters bring to teachers in great confidence and which the youngster would greatly prefer not to have the parents know about. The teacher must use the greatest discretion in such situations and be careful not to violate the confidence of the youngster. In addition, quite frequently the problem is of such a nature that the teacher knows of someone in the school or community who could make a better answer to the question than the teacher—perhaps the principal of the school, a vocational counsellor, a school psychologist, a family physician, a minister, or a priest—and in some instances it is some other person in addition to all or any one of these.

The third fundamental principle is more or less a corollary or a part of the previous two. Teachers should refrain from the very great temptation to be the source of information. It is well recognized that teachers, principals, and others today give the youngsters a great deal of misinformation, mislead them badly upon many occasions. It is difficult for the teacher to take a modest position and say, "This is a question about which I am not able to advise you or counsel you," and yet that must be done in a great many situations. Perhaps a suggestion may be taken from the practice of physicians, who are very modest and very reluctant to give answers and information, particularly if they cannot be positive about the validity of their answers.

The fourth suggestion is that in a great many situations the solution must be reached by the youngster, and the part of the counsellor is that of guidance and of training the youngster in how to approach the study of his problems. Many decisions in respect to problems

that occur over and over again are either identical or in similar form. The ultimate goal of guidance is for the counsellor to make himself relatively unnecessary by reason of having trained the students in attitudes, skills, approaches, and sources of information for the solution of their own problems.

Fifth, it is most imperative that the counsellor acquire all the data that he can about youngsters and that they learn by study and experience under guidance how to interpret various types of technical and personnel data, test results, etc. It is not good practice to attempt to solve pupil problems without pertinent data. Considerable time may be lost in procuring from pupils detailed information which the counsellor can obtain by a careful study of the personnel records.

Interrelation of Problems.—A rapidly growing concept among counsellors is that, while many problems are isolated and a great many others (far more than teachers realize at first) are complex, one has frequently to consider a number of problems which are related in some way or other before one is able to come to a good solution in respect to any one of them. For example, a pupil's behavior in school may be related to problems at home, problems of social acceptance, problems of health, problems of physical deficiencies, problems of unfortunate previous experiences in a related area, etc. There is a strong tendency to gather a great deal of data about all pupils, particularly those who seem to have unusually important problems, and to interpret all this data in a clinical, unified, integrated manner rather than to take hold of specific problems in an atomistic fashion.

Teacher Attitudes.—One of the difficulties in developing good guidance and counselling practices is the tendency of many teachers to think of things somewhat differently from the way in which other persons think of personal and human problems. It would of course be a little better if teachers had somewhat more experience in family life and in bringing up children in the home. But that is not an insuperable difficulty. Teachers do find it, however, somewhat difficult to realize that problems of human relationships are as important as or more important than subject matter, information, and skills. They also have a tendency to be somewhat pedantic and dogmatic and have difficulty in discussing things with youngsters on anything like a co-operative or ordinary social basis. It is also true that teachers, particularly in their first few years and as they become much older, have a tendency to shy away from problems that relate to sex and to various other matters that are ordinarily not discussed in groups or among strangers. Many of the child's most important problems are

of this nature and they need to be discussed confidentially and sometimes quite fully. This is particularly true where youngsters come from homes where parents likewise dodge their responsibility in connection with these problems. In fact, the teacher counsellor should be thought of as a person to whom any sort of problem which bothers the youngster a great deal might be taken.

The teacher should recognize that there are some problems, some questions, that are exceedingly delicate and that the degree and extent to which the teacher goes into those problems will not depend upon local conditions only; for example, local prejudices, local backwardness, or ultramodern ideas about general questions, and also about the particular home. Where there is doubt the elementary school teacher should consult with the principal or the parents in the home about the advisability of discussing problems with pupils which are raised by them.

The teacher must realize that her function in elementary school is to help children grow up. Contributions to this may be made through the regular subjects and through activities of an extracurricular nature, but growing up sound and sturdy in personality and in the attitude towards self and towards others involves a tremendously important factor, namely, guidance and counselling. Personal conferences are needed in regard to problems which may not be discussed in groups. Teachers who do not find a place for service in this area are educating only partially.

QUESTIONS, PROBLEMS, AND EXERCISES

1. List those areas of learning in which children of high mental ability will be more apt to succeed.
2. Discuss the major differences in learning among superior and low average children.
3. Prepare a five-minute talk on "Classifying children on the basis of mental ability."
4. Discuss the advantages and disadvantages of children's being grouped for instructional purposes on the basis of their social ages; on the basis of accomplishments in the tool subjects.
5. List the information that a second grade teacher should have in the fall before working out her long-view plan in reading; that a sixth grade teacher should have in working out her long-view plan in arithmetic.
6. List ways of providing for individual differences in reading in primary grades; in intermediate grades; in seventh and eighth grades.
7. Prepare a ten-minute talk on "Fitting the curriculum to children's capacities, needs, and interests rather than to grade classification."

8. Plan a weekly program or schedule in which you will make provisions for superior, average, and dull children in reading.
 9. Prepare a ten-minute talk on "How to provide for individual differences of children just entering the seventh grade."
 10. Outline a remedial reading program for seventh grade children.
 11. Prepare a program in mathematics for seventh grade which will fit the needs of those children who are retarded in mathematics; for those who are advanced.
 12. How would you prepare a spelling list for poor spellers in fifth grade?
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Chapter 20

RECORDING AND REPORTING PUPIL GROWTH

1. MARKING SYSTEMS

Within recent years several important trends have been operative with respect to the theory and practice of measuring and recording pupil growth. In the first place, less importance is being attached to marks as a means of motivating learners. They are not so conspicuous in the life of the school. Secondly, final marks or measures of growth are based less exclusively on written tests than formerly, and more on other measures of growth, such as observations, ratings of performance, daily records of behavior, and the like. A third trend may be seen in the tendency to measure more completely learning outcomes, other than the acquisition of information, e.g., understanding, mental and social skills, attitudes, ability to apply, and ideals.

The Passing of the Percentage System.—Within recent years the percentage system, or numerical system with a range of 100 points, has ceased to be the predominant marking system in American schools. Even when the 100-point numerical plan is used in scoring objective test papers, the scores are usually transmuted into five or six categories and designated by as many letters of the alphabet. The latter is commonly referred to as the literal marking system.

The decrease in the popularity of the percentage marking system can be attributed to several fallacies in the assumptions which underlie the plan. In the first place, its use assumes that the discriminations which a teacher makes in evaluating a pupil's achievement are so fine and exact that a 100-point scale is needed to record these distinctions. With the present instruments of measurement, it is very doubtful that such fine discriminations can be made with any reasonable degree of accuracy. Even if it were possible to discriminate with such a fine degree of exactitude, it is usually unnecessary to do so.

Few schools ever actually use the entire 100 points on the percentile scale. If 70 per cent is the passing mark in the school, only the upper 40 to 50 per cent of the scale is actually used. Even that many points call for discriminations of too great exactness. In the event a teacher could determine with absolute accuracy that a test paper should receive

a mark of 85 per cent, the mark would have no meaning unless the relative difficulty of the test could be clearly established. The divisions on a percentage scale represent percentages of "something." Do they represent percentages of perfection, or the teacher's knowledge of the subject, or what? Until that question is answered, no one knows what a passing or failing mark on the percentage scale means.

The Literal System of Marking.—In an attempt to eliminate the necessity for making the impossibly fine discriminations required by the percentage system, many schools have devised a five-point marking system. The interval between each two points is designated by a letter of the alphabet, usually A, B, C, D, or F. Many literal systems are merely modifications of the percentage system (for example, systems in which A equals 90 to 100 and B is the equivalent of 80 to 89, etc.). A more satisfactory procedure is to have A represent *superior* achievement, B represent *good* work, C stand for *average* achievement, D represent *poor* work, and F represent *failure*.

A clear understanding on the part of teachers of what the different letters represent will serve to decrease the variability of teachers' marks. A mark of A given by one teacher may be in respect to the quality and quantity of work the equivalent of a mark of B given by another teacher in the same school. An examination of the marks given by one teacher revealed that over a period of several years he had never given a student a mark of A, while another teacher had given a large number of A's and very few F's. It is hardly likely that any teacher over a period of years will not encounter at least a few very superior pupils.

Marking System Based upon the Normal Distribution Curve.—As deficiencies in the conventional marking systems have become more apparent because of the application of scientific methods to school measurement, new systems of recording pupil achievement have been suggested. A system based upon the normal distribution of normal probability curve has been discussed widely, but adopted by a comparatively small number of schools.

The theory of probability is based upon the results of observations of the traits of large numbers of unselected human beings. These observations reveal that in the measurement of any trait the subjects are distributed by chance according to Figure 1.

It will be observed that a large number of cases cluster around the average and a steadily decreasing number are found as the extremes are approached. Since the results of accurate measures of the school achievement of unselected groups of children tend to be distributed

according to the normal probability curve, it seems logical to make a comparable distribution of marks.

While no mathematical formula will indicate the *exact* number of pupils who should receive A, B, C, D, or F, the normal distribution curve provides a means of ascertaining the approximate expectancies

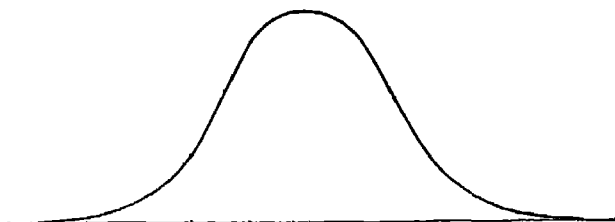


Figure 1 The Normal Probability Curve

for the occurrence of each mark. The expansion of the binomial $(a + b)^n$, in which one (1) less than the number of points on the marking scale is the exponent, will give the approximate occurrence of the marks in each category. For instance, in a five-point scale the formula is :

$$(a + b)^4 = a^4 + 4a^3b + 6a^2b^2 + 4ab^3 + b^4$$

Note that the coefficients of these successive terms in the right hand member of the equation constitute the following fractions of the sum of all of them :

$$\frac{1}{16} \quad \frac{4}{16} \quad \frac{6}{16} \quad \frac{4}{16} \quad \frac{1}{16}$$

Changing the fractions to rounded-off percentages :

Percentage	6	25	38	25	6
Marks	A	B	C	D	F

Limitations in the Use of the Normal Curve.—The normal distribution curve is mathematically true only when applied to a large number of cases. Hence the distribution of the marks of a small class into exact percentages as suggested by the curve is subject to a large error. Similar divisions of the marks of large classes are likewise liable to serious error. The fact that classes deviate from the normal injects another biasing factor into the situation. Some classes may have a large number of superior students in them, whereas another class may have a disproportionate number of poor students. In regard to the amount of deviation, the teacher can verify his own judgment by the use of standardized achievement tests. However, as

was suggested in Chapter 18, the validity of standardized achievement test scores should be verified in terms of the objectives of the course.

It is extremely important for the teacher to understand, in the use of the normal curve as a basis of marking, that it is not necessary to give the mark of failure to any student or to any exact percentage of the class. Neither is it likely, using a five-point marking system, that any exact percentages of the students, or for that matter any student, in a given class will receive a mark of A.

Allowances should and can be made for variations arising from small samplings of students. Various plans have been proposed which give a certain degree of latitude within each interval. For example, the distribution of marks might be as follows:

A	B	C	D	F
0—15%	20%—30%	30%—40%	20%—30%	0—15%

Dangers in Excessive Flexibility.—While too strict adherence to the normal probability curve is undesirable in the allocation of marks, extreme flexibility should likewise be avoided. One of the chief values of this type of marking system is that it promotes greater uniformity in the distribution of marks among teachers within a school. Preconceived ideas cause some teachers to consider all pupils in their classes as inferior or as superior. This bias is often revealed in the assignment of a large number of either high or low marks by a teacher over a period of years. Accurate evaluation of the achievement of a large number of classes, having a total enrollment of several hundred students, will very closely approach a normal distribution of marks. In most high schools, intelligence tests scores of all the pupils are available. These scores provide a sound check on the teacher's judgment in regard to the extent to which a class deviates from the normal.

Advantages of Normal Distribution System.—Despite the difficulties involved in the proper use of this type of marking system, it possesses certain distinct values. These advantages may be summarized as follows:

1. It serves to prevent misunderstandings among the teachers in regard to marks.
2. It affords a more satisfactory basis for an understanding of the meaning of school marks by pupils and their parents.
3. It provides marks of greater significance for guidance and other educational uses, since the subjective elements in marking are reduced.

In interpreting a mark, it should be related to some standard as the basis of comparison. The normal distribution provides such a standard. A mark reveals the pupil's achievement in relation to that of normal achievement of a typical class in the subject. Pupils and parents understand the meaning of a mark more readily when it is explained in terms of the achievement of the other members of the class.

Effective use of the system serves to minimize the opportunity of the teacher who wishes to establish a reputation for high standards by giving an unreasonable number of low marks. Likewise restrained is the teacher who appears oblivious of accepted standards to the extent of giving unearned high marks to students in order to win their approval. The pupils and schools deserve to be protected from teachers such as these.

Decreasing Emphasis Upon Marks.—Because of the increasing recognition of the bad effects of the use of marks upon children's attitudes toward school, learning, and teachers themselves, as well as the increasing dependence of good teachers upon other means of motivation, less and less is being said in school about marks, and parents are being encouraged to attach much less importance to marks. It is quite possible that before a great many years pass, marks will not be given to pupils or to parents, but kept for purposes of guidance and teaching.

2. RECORDS

Fifty years ago school records represented a series of judgments of the child. Achievement was recorded on the basis of specific goals set for a grade and these goals were limited to the mastery of the school subjects. Today records are used for the purpose of guiding the child, ascertaining his status in subject matter, and as evidence of reasons for success or for failure.

The records of today do not have little squares in classbooks in which a teacher records a numerical grade, but they have larger spaces in which descriptive accounts may be written. Graphs present a picture of the child's growth. Anecdotal records reveal what the child has done or said. Cumulative folders and records show the developmental pattern of the child. These records are constructed by the teacher, parents, and children cooperating—the teacher giving information pertaining to the child's patterns of behavior in school; parents presenting information pertaining to the home life of the

child; and the children assisting in setting up goals of accomplishment against which they evaluate their behavior patterns.

The schools are concerned with the problem of devising new record forms which describe child growth and which record information obtained by means of the new evaluative techniques. The new record forms are assuming the characteristic of objectivity thus making it possible for any one who reads the record to understand the information which is recorded. The forms of the records vary but are simple. The mechanics of keeping the record should not take too much time, but must be sufficiently complete to be of practical value to the teacher.

Attendance Records.—Daily attendance records are important documents. Frequently it is necessary for courts to check the attendance of children. In some states state and county school money is distributed on the basis of children enrolled or on the basis of daily attendance. In order to locate children who are of school age and who are not attending school, the teachers' daily attendance record is checked against the school census. Many children who should be attending school in the United States are not in school because communities and school administrators have not checked carefully their attendance records against the census lists. In smaller schools teachers are supplied with attendance registers, while in larger school systems, a list of absentees is sent to the principal's office soon after school is opened.

Family Background.—In order to understand children it is essential that the teacher have information pertaining to their life and environment in the home. The economic and social status of the family, interests, and experiences, all affect the child's behavior. Information in regard to the home which may be obtained by means of questionnaires or interviews is as follows:

1. Family

- a. Birthplace and date of birth of child
- b. Parents
 1. Nationality
 2. Occupation
 3. Education
 4. General health
 5. Marital status
 6. Number of siblings—age, sex, education
 7. With whom does child live

2. Home

- a. Type—house, apartment, trailer, etc.

- b. Educational features in home—books, radio, etc.
 - c. Regular jobs done by child
 - d. Things which family does together
3. Leisure time activities
- a. Play space at home—in yard and in house
 - b. Hobbies
 - c. Travel
 - d. Attendance at picture shows, skating rinks, etc.

Frequently part of this information is recorded on a health record card or on permanent record cards. Often teachers use 4- x 6-inch cards and file the cards in a small filing box which may be bought at a five and ten cent store.

Health Record.—Many classroom teachers are expected to assume the major responsibility in making observations pertaining to the health of the child, in checking periodically on such factors as weight, in administering screening tests in hearing and vision, and in keeping the records up to date. Schools use various types of records, which may be a separate health card, a part of permanent record card, or an anecdotal record. One health record (Figure 2) is presented in order to show specifically the information which is generally requested.

Achievement Profile.—An achievement profile represents the status of a child in various areas of learnings. By means of an achievement profile, information that may be obtained in regard to (1) years or months retarded or accelerated and (2) growth in terms of years or months obtained by comparing profiles of two tests given several months apart. Teachers and children often construct their own profiles and fit them to their specific problems which they wish to study. Of the following profiles one is based on a standardized achievement test and the other was constructed by a teacher (Figure 3). This profile shows that in September, Mary was accelerated in three subjects and retarded a half year in arithmetic fundamentals.

The Spelling Profile (Figure 4) is taken from the records of a student teacher of the University of Colorado, Boulder, Colorado.

The spelling profile shows number of words missed on Wednesday's and Friday's tests with type of errors made on each test. By knowing the type of errors made, it was possible for the child to direct his study efforts in order to remove spelling errors. In comparing the profiles it is evident that the child improved as a result of study on Thursday and that the number of types of errors is decreasing gradually.

METROPOLITAN ACHIEVEMENT TESTS

PRIMARY II BATTERY: FORM A

(Revised)

Prim. II

By GERTRUDE H. HILDRETH, Ph.D.

Teachers College, Columbia University, New York

A

(Revised)

With the coöperation of

FREDERICK B. GRAHAM, RICHARD D. ALLEN,

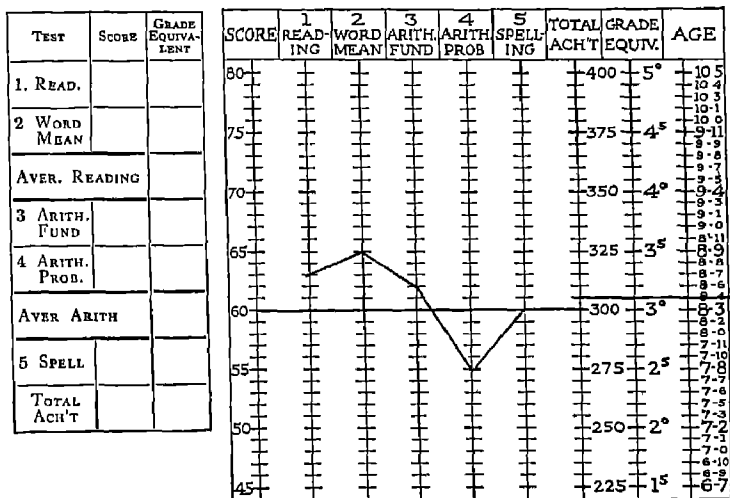
HAROLD H. BIXLER, and WILLIAM L. CONNOR

For Grades 2^o to 3^s

Name *Mary* Date *Sept.* 19..

Grade *3* Age *8* yrs *2* mos. Teacher

School City State



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PRINTED IN U.S.A. MAT:PRIM II REV..A-10

Figure 3. Metropolitan Achievement Test

Anecdotal Record.—The anecdotal record, frequently called the journal record, is a cumulative record in which teachers record positive and negative behavior patterns of children in varying situations and in different activities over a certain period of time with the date of each incident. These records may contain information pertaining to activities in and out of school, such as observations of behavior patterns; accurate accounts of statements made by children either orally or in written work; contributions made to work or play activities; responsibilities assumed; creative accomplishments in art and music. In order to avoid self-consciousness on the part of the individual for whom a record is being kept, all recording should be done in the absence of the individual. All entries must be made as soon as possible in order to avoid omitting important items which might be forgotten. A place may be provided on the record for interpretive data and suggested recommendations. Since the characteristics of a good anecdotal record have been presented in the previous chapter, it will not be necessary to discuss them at this point. Only important information should be recorded on the cumulative record. The following record illustrates one type of incomplete anecdotal record of a child who was a reading problem.

Name of Child			
Date	Activity	Accomplishment	Behavior Modified by
Jan. 27	Group Reading	Read poorly	Not interested
Jan. 28	Silent Reading	Sat and dreamed	Not interested
Jan. 30	Silent Reading	Very little done	"I don't want to"
Feb. 4	Group reading	None	Inattentive
Feb. 6	Individual reading	Read well, enjoyed reading	Individual attention received
Mar. 5	Group reading	Contribution based on own efforts	Interested in sharing information

Sociograms.—For the teacher to understand the individual pupil it is necessary for her to have a knowledge of his social status in a group of his peers. Sociometry has made available an instrument usually referred to as a *sociogram* by which teachers can ascertain the degree to which the individual pupil is accepted or rejected by other members of his class. By the simple device of asking members of a class to express their preferences for those they wish as their best friend or any one of many other social relationships, it is possible to obtain information in regard to the social structure of a class or other group of children.

Data can be obtained in regard to the status of the individual in different roles in the group by constructing sociograms based upon the responses to questions pertaining to various matters. For example, an individual may be chosen as the one with whom other children may wish to work but he may be rejected as the best friend. Since social status is not fixed, sociograms based upon different questions may reveal varying types of acceptance or rejection of an individual. Various degrees of social acceptance of an individual in regard to the same matter may be ascertained by asking the members of a group to express first, second, and third choices: write the name of your *best* friend, the name of your *next best* friend, and the name of your *third best* friend.

The sociogram is constructed by writing the name of each pupil on a piece of paper. The name of each girl is usually encircled while the name of each boy is usually placed in a rectangle. The response of each pupil is indicated by an arrow drawn to the name of the classmate chosen. If more than one choice is requested, the different choices of each child may be indicated by the use of differently colored ink (or pencil) or by solid lines for first choices, broken lines for second choices, and dotted lines for third choices. Mutual choices of pupils may be indicated by lines with arrows at both ends drawn between the names of two children. Many teachers construct sociograms of their classes at the beginning of the school year. The children whom the sociogram reveals are not accepted by the class (usually designated as isolates) are assisted by the teacher in more effective participation in the activities of the class. If the presence of cliques within the class is revealed by the sociogram, wider participation by members of the clique in activities involving the whole class is encouraged. Near the end of the school year another sociogram of the class can be constructed to reveal the progress in social relationships made during the year. Figure 5 is a sociogram of a fourth grade class in Corpus Christi, Texas.¹ The sociogram was made in October upon the basis of three questions or choosing situations as follows:

1. Write the name of your best friend.
2. Write the name of your next best friend.
3. Write the name of your third best friend.

It will be observed that a clique existed within the class, that certain pupils were isolates, and that certain children outside the clique chose

¹ Used by permission of Anna Belle Donalson, Fourth Grade Teacher, Furman School, Corpus Christi, Texas.

members of the clique but were not chosen by members of the clique (usually referred to as fringers). The sociogram also reveals that at the fourth grade level girls choose girls and seldom choose boys. The sociogram for the same class indicating the choices of the boys

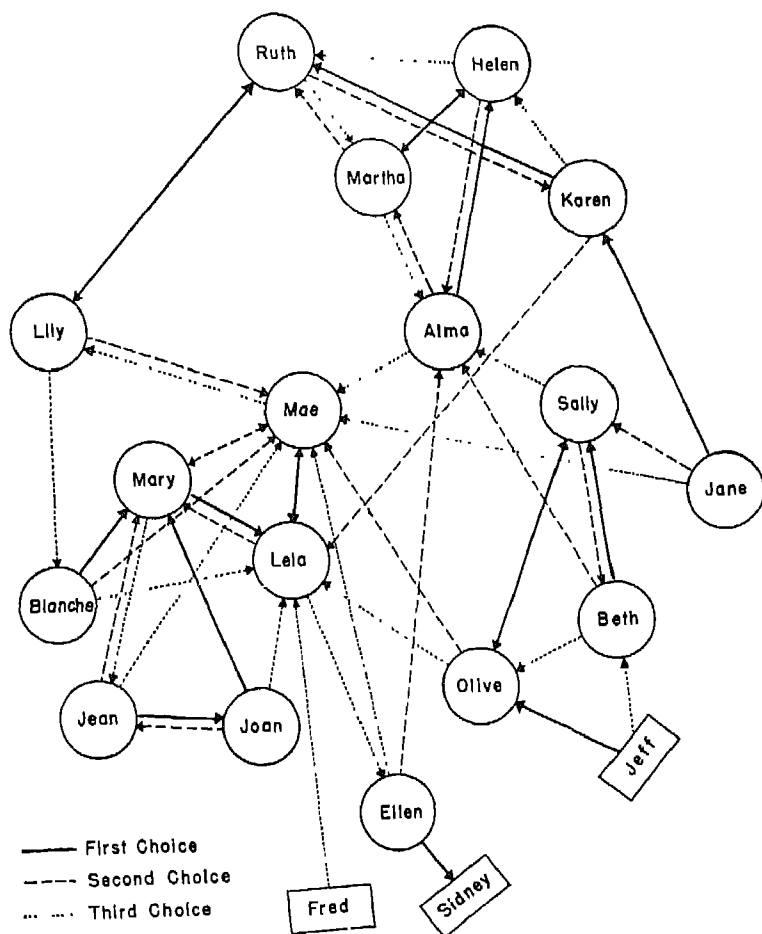


Figure 5 Sociogram of Seventeen Fourth Grade Girls

shows that in most cases they choose other boys rather than girls.

Sociograms of first, second, and third grade classes show that boys and girls choose each other.

1A	Name—(Last-First-Middle)	Birth Date
2	FAMILY RECORD (To be entered whenever change occurs)	
3	Date	
4	Family Status	
5	Occupation of Father	
6	Occupation of Mother	
7	Number of Children	
8	Position of Child	
9	Comments	
10	Teacher's Signature	
SPEECH AND READING DISABILITIES		
11	Date	Explanation
12		
13		
14		
15		
16		
17		
18		
19	Date	REMARKS ON MENTAL AND PHYSICAL HEALTH
20		
21		
22		
23		
24		
25		
26		
27		
28		
29		
30		
31		
32		
33		
34	Mother's Health	Home Conditions
35	Father's Health	
36	Child's Health	
37	Operations	
38		
39	Date—First Enrollment	School
40	Father	Birthplace
41	Name—(Last—First—Middle)	Birthdate
42		Sex
43		Race

Figure 6a. School Record Card

[illegible]

Mother				Birthdate				Sex		Race	
GRADE 4 OR 8 AS NEEDED											
Abs.			Tardy			Abs.			Tardy		

S. T.	Av	SUBJECT		S	T	Av	SUBJECT		S	T	Av	SUBJECT		S	T	Av
		Reading					Reading					Reading				
		English					English					English				
		Spelling					Spelling					Spelling				
		Arithmetic					Arithmetic					Arithmetic				
		Social Studies					Social Studies					Social Studies				
		Natural Science					Natural Science					Natural Science				
		Penmanship					Penmanship					Penmanship				
		Art					Art					Art				
		Music					Music					Music				
		Physical Education					Physical Education					Physical Education				

MA	IQ	NAME	Date	CA	MA	IQ	NAME	Date	CA	MA	IQ	NAME	Date	CA	MA	IQ

Date	Gr E	Gr	TEST	Date	Gr E	Gr	TEST	Date	Gr E	Gr	TEST	Date	Gr E	Gr	TEST

13-Diplomatic	15-Friendly	17-Industrious	19-Leadership	21-Obedient	23-Respectful	25-Self-confident	27 Self-controlled
14-Tactless	16-Aloof	18-Lazy	20-Followerhip	22-Disobedient	24-Disrespectful	26-Timid	28-Uncontrolled

Mother				Address (Use Pencil)				Phone			
--------	--	--	--	----------------------	--	--	--	-------	--	--	--

The teacher of the class included in the sociogram made an effort to assist one of the isolates in the class by

1. Encouraging her to participate in not too strenuous games
2. Making a friendly visit to her home.
3. Giving her errands and tasks to do with other children.
4. Giving her every opportunity to appear well before the group.
5. Asking her mother to let her take dancing in order that her muscular coordination will be developed.

Permanent Cumulative Records.—Permanent records are a summary of the child's growth from year to year and show the progress which he is making as he is maturing. These records usually contain the following information: health record, interests, scores made on achievement and intelligence tests, social qualities, frequently a profile. These records are usually recorded on cardboard or in booklets and are filed in the superintendent's or principal's offices. Figures 6a and 6b present a permanent cumulative record.

Cumulative Folder.—In order to discern the growth pattern of a child, it is essential that a record of his development be kept over a period of years by the teachers under whose guidance the child happens to be at a specific time. Each teacher should study the previous records and add to the records. Information which is filed in cumulative folders should include the following: health record, achievement profiles and achievement test results, typical art work, records of daily work, teacher-made tests which have been taken by the child, individual sociograms, anecdotal records, questionnaires filled in by parents and children, records of conferences with children and parents.

A manila folder may be used to accumulate the information and can be filed in a wooden box made by manual training classes or in a box obtained from a merchant. Since the folders are likely to become bulky and difficult to manage, they should be "weeded out" several times during the year. At this time the teacher should summarize the information in a descriptive statement which tells about the child in various areas of learning and social activities. Cumulative records must be adjusted to fit each school system as school systems vary in regard to administrative policies, type of curriculum used, evaluative techniques used, and content that goes into the folder.

Since records include both positive and negative data, it is imperative that every teacher use the information professionally and should not permit herself to be prejudiced toward any child. In every record there also will be data which will reveal the worth of each individual.

3. REPORTING TO PARENTS

As records change and take into account the fact that "the whole child" goes to school, reports to parents should also stress the fact that the child is growing as a "whole." The traditional card with its marks of 70, 95, or A, B, C, does not give any indication of the type of behavior patterns that are being developed or whether the child is growing according to his level of ability.

Report cards have been deservedly criticized for not being accurate records of pupil growth. It has been claimed that they do not reveal general development and ignore very important areas of growth, e.g., various characteristics of personality and social behavior. It also has been pointed out that the marks do not measure progress. The marks are usually in terms of relative status of the children and do not furnish measures of individual child growth. Another weakness apparently lies in the fact that the marks are not in terms of absolute achievement. Since teachers vary so much in standards, the marks are misleading and not understood by parents. Still another objection is that teachers tend to allow good or bad behavior, personal likes and dislikes, personal appearance, "apple-polishing," and other extraneous influences to affect the marks. Some of the main limitations of the traditional report card are:

1. The temptation to use marking as a device to coerce children into doing better work
2. Probability of unsatisfactory competitive comparisons by parents and children
3. Misunderstandings of objectives of school by parents
4. Concern of children with the grade rather than with the desire to improve and to grow in the acquisition of knowledges and understanding of all types of learnings
5. Tendency to overemphasize memorization of facts
6. Effect of overt behavior upon the mark
7. Possibility of discouraging child receiving low grades to point of giving up trying
8. Probability of developing undesirable attitudes, such as superiority complexes, selfish pride, or snobbery, of children who receive high grades
9. Rewards for high grades encourage child to resort to undesirable means of securing information by cheating or lying

Trends in Reports.—Administrators and teachers are realizing the limitations of the traditional report card and are attempting to devise more accurate ways and means of reporting to parents. The

points which are being considered in devising new reports which describe the growth and development of the child as it is revealed by the new evaluative instruments are as follows :

1. Consistency with the philosophy that the "whole child" is growing
2. Accuracy, that is being reliable and valid
3. Considers strengths and weaknesses of children
4. Terminology that is understood
5. Economical in time needed to record data
6. Practicality—usable for guidance purposes
7. Form usable at any time

Transition from Traditional to Modern Reports.—Two procedures may be followed in making a change from the traditional report card to the modern report. In the evolutionary method the change was made first from the numerical to the letter system. In the second stage of development the letter system was changed to U (unsatisfactory) and S (satisfactory) according to the ability of the child. The final step involves the use of statements indicating behavior patterns. The latter system may be confusing to parents and children. With each change a program of parent education must be developed in order to obtain the approval of those who are interested in the school program. Constant changing is not conducive to satisfactory parent-teacher-pupil relationships.

Another approach is to make the change in an experimental way. In this program the traditional card is used in the majority of the grades and the new reporting system would be used in one or two grades. A good place to start the new plan is in the primary grades. In this way a smaller percentage of the parents would be affected by the immediate change to the new plan and an interested curiosity might be aroused on the part of many who are not directly affected by the change. Then as the primary children advance in the grades, the new program can expand; over a period of six or eight years, the new methods of reporting will be accepted by the public without public relations being strained. The speed with which a new reporting system is introduced into a school system must be determined by the nature of the community, the personnel of the faculty, and the status of home-school relationships.

Parent Conferences.—Modern schools are stressing parent-teacher conferences as a means of reporting the child's progress in school. These conferences may be held on a certain afternoon during the week or two entire days in each five or six-week period may be devoted to the work. In order to have a satisfactory conference with

a parent, it is essential that the teacher prepare for the meeting by becoming familiar with the child's cumulative record and by considering the following points :

1. Favorable behavior patterns which should be reported first
2. Unfavorable behavior problems
3. Attendance record
4. Special difficulties in basic tools
5. Child's ability to do school work
6. Select parts of record which will be shown to parent
7. Study those phases in which the child is apt to make most improvement
8. Recall home conditions
9. Anticipate questions which the parent may ask and prepare answers to them

During the conference the teacher should not ask too many questions, but she should be an attentive and sympathetic listener and give suggestions and advice in a kind and tactful way. It is not advisable to take extensive notes, but after the parent has gone, the teacher should make a memorandum of major issues discussed.

Written Appraisals.—Written statements should be phrased so that the parents will understand reports of the child's progress. Written appraisals should be characterized by the following topics :

1. Favorable comments should begin and close the letter.
2. Items pertaining to growth socially, physically, intellectually, and emotionally should be included.
3. Comparisons with child's own previous accomplishments should be made.
4. Make evaluations on the basis of child's ability.
5. Give causes for nonprogress.
6. Offer suggestions for home guidance—commenting that they may or may not work.

Objections to written appraisals are that they require much time to write and that it is very difficult to convey information to parents through the written word. With large classes letters may become stereotyped, which would not justify the expending of time and effort by the teacher.

Examples of New Reports.—Ways and means of reporting the progress of children to parents through reports have taken several different forms. The Progress Report forms employed in the Lincoln, Nebraska, schools and Palo Alto, California, schools are typical illustrations of the new types of forms for reporting to parents.

[illegible][illegible]

Figure 7. The School's Report to the Parents: Palo Alto, Calif, Grades 1 to 3

To Parents or Guardian		First Quarter	Second Quarter	Third Quarter	Fourth Quarter
<p>The descriptive statements in the column below represent desired goals of pupils in the school. To the right is given the School's estimate of your child's apparent progress in achieving these goals. Progress is indicated by a check mark, and is not intended as a comparison of your child with another, or with the class.</p>					
PROGRESS IN FUNDAMENTALS					
READING					
1	Understands what is read				
2	Reads well aloud				
3	Has adequate vocabulary				
ARITHMETIC					
1	Knows number facts for grade				
2	Uses number facts accurately				
3	Reasons well in solving problems				
SOCIAL STUDIES					
1	Shows ability to gather facts				
2	Shows ability to interpret facts				
3	Takes part in class discussions				
4	Is interested in current events				
LANGUAGE					
1	Expresses ideas well in writing				
2	Expresses ideas well orally				
SPELLING					
1	Spells required lists of words				
2	Uses correct spelling				
WRITING					
1	Writes plainly and neatly				
NATURAL SCIENCE					
1	Observes and enjoys nature				
2	Acquires nature facts				
LIBRARY					
1	Uses good library procedures				
2	Shows interest in good books				

To Parents or Guardian:		First Quarter	Second Quarter	Third Quarter	Fourth Quarter
<p>A check will be placed opposite each characteristic to indicate the degree of growth your child has made each quarter. Only one of the three measures of growth will be checked each quarter, and at no time will checks be placed opposite the names of the areas evaluated.</p>					
PROGRESS IN FUNDAMENTALS					
PHYSICAL EDUCATION					
1	Takes part in organized games				
2	Makes proper use of free play				
MUSIC					
1	Participates in music activities				
2	Shows growth in music appreciation				
3	Is learning to play an instrument				
ART					
1	Participates in art activities				
2	Shows growth in art appreciation				
SOCIAL GROWTH					
HEALTH HABITS					
1	Attends school regularly				
2	Keeps neat and clean				
3	Seems well adjusted and happy				
4	Has good posture				
WORK HABITS					
1	Arrives on time				
2	Listens to teacher's instructions				
3	Makes satisfactory effort				
4	Finishes work undertaken				
5	Works well alone				
6	Uses time wisely				
SOCIAL HABITS					
1	Practices self control				
2	Observes safety rules				
3	Shows respect for authority				
4	Shows courtesy toward others				
5	Cooperates well with others				
6	Shows respect for property				

Figure 8. The School's Report to the Parents: Palo Alto, Calif., Grades 4 to 6

NAME	1st	2nd	3rd	4th
PERSONAL AND SOCIAL GROWTH OF THE CHILD				
Health Cheerfulness, cleanliness, posture, rest habits, consideration for the health of others				
Responsibility and Self control Willingness to accept responsibility for own actions, self reliance, emotional control, respect for personal and public property				
Safety Safety within the school building, on the playground, away from school				
Getting along with others Consideration for others, helpful contributions to group planning, good sportsmanship, willingness to abide by group decisions				
Work and study habits Industry, perseverance, satisfaction in doing work well, promptness, interested attention				
Interests and appreciations A variety of wholesome interests, appreciation of good qualities and achievements of others.				
+ - Special commendation, S - Satisfactory, usual development for child of his age; v - Improvement needed				
PARENTS' QUESTIONS AND SUGGESTIONS				
First report	Signature of parent _____			
Second report	Signature of parent _____			
Third report	Signature of parent _____			
GROWTH IN SKILLS, UNDERSTANDINGS AND APPRECIATIONS				
English—Oral and written				
Clear expression of ideas _____				
Good choice of ideas _____				
Use of correct forms of speech _____				
Enjoyment of stories, poems, dramatizations _____				
Ease in speaking before a group _____				
Clear handwriting _____				
Legible handwriting _____				
Reading				
An active interest in reading _____				
An understanding of what is read _____				
Interest in getting new words and meanings _____				
Independence in getting new words and meanings _____				
Arithmetic				
An understanding of number relationships _____				
Knowledge of facts and processes _____				
Skill and accuracy in work _____				
Clear reasoning in solving problems _____				
Social Studies				
Growth in understanding of community life _____				
Knowledge of geographical and historical facts _____				
Interpretation of pictures, maps, globes _____				
Interest in social studies _____				
An active interest in world events _____				
Music				
Pleasure in singing and listening to music _____				
A feeling for rhythm _____				
Skill in reading music _____				
Art				
Eagerness to make good use of art materials _____				
Expression of ideas in an interesting way _____				
1-Excellent, 2-Very good, 3-Good, 4-Fair, 5-Failing				

Marks in the various subjects have been taken into account the items listed under each subject and the general success of the child in the work set up for his grade.

Where the plus mark (+) is used, that one phase of the child's work is better than the subject mark indicates.

Where the check (v) is used, that one phase of the child's work is poorer than the subject mark indicates.

Figure 9. The School's Report to the Parents: Lincoln, Nebr.

QUESTIONS, PROBLEMS, AND EXERCISES

1. What are the relative merits and disadvantages of (a) the percentage marking system, (b) use of letters, A, B, C, D, and F, (c) the use of Satisfactory and Unsatisfactory?
 2. Select a child and develop a permanent record for him.
 3. Why is it important to develop ways of measuring growth in appreciations, attitudes, work habits?
 4. Develop a plan for an evaluative program at the elementary level which is based on teacher evaluation of child growth within the areas of co-operation, appreciation, industry, courtesy.
 5. Interview a principal in order to learn the procedure used in requisitioning various supplies, such as paper, paints, books, etc.
 6. Write a letter to parents informing them of some particular accomplishment of their child in school.
 7. Make a set of notes in preparation for a conference with a parent of a "problem child."
 8. Review research in regard to the effects that traditional marking systems have had upon children and report findings to the class.
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Chapter 21

SPECIAL EDUCATIONAL PROBLEMS

1. EXTRA-CLASS ACTIVITIES

The successful teacher of today no longer thinks of extracurricular activities as extras, frills, concessions to pupil desire for play, but as an important educational experience and an integral part of the school program. How children will think, act, and feel in the future can be influenced very materially by their experiences in extracurricular activities. From these experiences they can acquire important habits, skills, interests, tastes, information, understandings, and attitudes as illustrated below for certain of the objectives of education.

Today society is beginning to recognize its responsibility in providing situations in which children will feel more secure and in which they may assume responsibilities for furthering group participation, thus giving them a feeling of belongingness and that they are needed. Organizations in which children will receive guidance and to which many children belong are scouting clubs, the Red Cross, art clubs, and bands. In these organizations and many others, human values are preserved and a deeper appreciation of the worth of each individual is developed. Following is a description of several clubs of educational potentialities found in many schools.

Junior Red Cross.—The Junior Red Cross is the American Red Cross in the schools. The program meets the needs of the school and should serve as a factor contributing to the regular school program. The unit of enrollment is the school group, the fee being fifty cents for each elementary schoolroom. No individual fee is required, but membership will have a greater meaning for the children if they cooperate in providing the fee. Each elementary schoolroom is entitled to the American Junior Red Cross News. The success of the program requires the combined interest and effort of school authorities and the local Red Cross Chapter. When a chapter desires to develop its junior membership, it should secure the approval and cooperation of the school officials. If the school desires the Junior Red Cross it should seek the cooperation of the local Red Cross Chapter. If there is no

local chapter, school authorities should apply directly to the area office. National office, American National Red Cross, Washington, D. C.

Camp Fire Girls.—The objective of the Camp Fire Girls program is to have a club for teen-age girls in which they work and play and learn to plan, to take responsibilities, and to cooperate with others in working toward a common goal. The club is a little democracy. A Camp Fire Girl may be any girl of ten years or over. There are six to twenty girls in a group, who meet once a week in a school or church or in a member's home. Activities include home crafts, hand craft, health, nature, business, Indian lore, etc. National dues are one dollar a year. Clubs, church groups, schools may organize Camp Fire Clubs. The junior group is known as Blue Birds and any girl seven to nine years may belong. Blue Bird dues are fifty cents a year. For information write to Camp Fire Girls, Inc., New York.

Scouting Clubs.—Lord Baden-Powell was the founder of the entire Scout movement for boys and girls. The relationship between the Scouts and the American schools is very close. Scouts are held in high esteem by citizens in the community, by school faculties, and by students. Girls Scout troops are small, democratic groups who respect the rights and beliefs of others and welcome any girl into the group regardless of race, color, or creed. The ideals of the group embody a practical code of conduct and a sound basis for citizenship. Girls ten through fourteen years of age may join the troop. The junior group is known as Brownie Scouts; girls seven through nine years of age are eligible. Annual national membership dues for each girl are fifty cents. The troop meets once a week. As many activities as possible are carried on out of doors. National headquarters is maintained in New York.

A boy scout prepares himself for many things, such as to rescue people, to help strangers, to gather firewood, to serve his country. Boys between the ages of nine and twelve are known as the Cub Pack. The most logical group to sponsor Cub Packs is the Parent Teacher Association. Parent participation is essential, as mothers serve as Den Mothers and fathers as Den Dads, and Den meetings take place once a week in the home and in the yard. Boys living in rural areas who go long distances by bus or car may organize a Lone Scout Tribe. National Headquarters is maintained in New York.

Boys' Club.—The Boys' Club is a nonsectarian organization whose program is adapted to all boys but particularly to boys from low-income families. It includes all boys from eight to twenty years of age.

A large proportion of the members live in the poorer sections of our cities and towns and many are of foreign parentage. The Boys' Clubs offer recreational games, motion pictures, physical training, life saving, correction of body weaknesses, shower baths, library activities, summer camps, and playgrounds. Boys' Clubs must have buildings or rooms set apart exclusively for club purposes. A club usually is started by a citizen who is interested in boys, and they often are sponsored by Community Chests. Headquarters in New York.

Audubon Junior Club.—The purpose of an Audubon Club is to study and to protect birds. Ten or more children of elementary school age constitute a club and each club has an adult adviser. Club dues are ten cents per member for the school year. Clubs may enroll at any time. Every club receives the Junior Club paper, *News on the Wing*. Club advisers receive a special booklet or guide, *Audubon Teacher's Guide*. Headquarters in New York.

Science Club.—Any one who is interested in science may join. Younger members range in ages from nine to fifteen. Often clubs set up requirements for admission—for example, a certain grade average, or to have completed a certain number of units in science, or to be a certain age. Clubs range in size from three members to six hundred. Sponsors should be science teachers with the quality of leadership. There is no charge for affiliation with the Science Clubs of America. Interested persons should write to Science Clubs of America, in Washington, D. C.

4-H Clubs.—4-H Club work is designed to meet the educational needs of rural boys and girls. The age limits are set by state extension services and usually range from ten to twenty years. 4-H Clubs are organized on a voluntary basis under the supervision of county extension agents, who are employed cooperatively by the Department of Agriculture, the State colleges of Agriculture, and county governments. Local leaders may be farmers, homemakers, teachers, and men and women of other professions. Each 4-H Club member does a piece of work that teaches better ways in homemaking, in agriculture, in raising cattle or poultry, etc. Club meetings are held in the homes and the work is done in the home or on the farm. The general activities of the 4-H Clubs include demonstrations, club days and club picnics, nature hikes, tours to observe good practices, camps, exhibits, etc.

School Camping.—School camping in the elementary schools has gone through the experimental stage and has proved to be a worth-

while educational experience for boys and girls. Schools should include camp life in the curriculum. The trend is for boards of education to use state-owned camps or to rent private camps for camping experiences for the children. School camps that are operated by boards of education usually employ part of the staff during the camping period.

Camp experiences have been provided for children by various agencies, such as Boy Scouts, Girl Scouts, Camp Fire Girls, service clubs, churches, fraternal orders. Camp experiences are many and varied, depending upon the program planned by those carrying on the project. Following are only a few of the many possible experiences: sharing camp duties; studying plants; learning how to relax; studying history of the region where the camp has been pitched; life-saving. In camps children learn to share responsibility, to live with others, and to expand and to extend their interests.

So well accepted as educational experiences have pupil "activities" become that some writers have advocated dropping the word *extra-curricular* and speaking of such activities as part of the curriculum or as "co-curricular" activities.

The most desirable outcomes will not automatically result from student participation in haphazard extracurricular activities. If the maximum educational benefits are to result, the activities and the student participation must be planned with definite educational objectives in view just as in the case of teaching and curricular experiences.

When a teacher is assigned the supervisorship of a student activity, he should think through carefully the more important contributions to educational objectives that may be made through the medium of that activity and read what others have said about the possible contributions. He should then think of the various mental, physical, and other activities in which students participating in the activity will engage and evaluate each of these in terms of the contributions they may make to skills, attitudes, ideals, interests, information, habits, and understandings. The results of participation should be thought of as

1. Contributing to important objectives of a nature not provided for by the curriculum; e.g., outcomes involved in cooperation, leadership, and initiative.
2. Contributing to objectives of at least moderate importance not provided for in the curriculum; e.g., accounting methods, athletic skills, and dramatic ability.
3. Reinforcing the curriculum by contributing additional experience to important objectives not adequately provided for in the cur-

- riculum; e.g., those outcomes involved in oral and written expression, understanding of community life, and social competence.
4. Contributing to relatively important objectives; e.g., pride in achievement of class, feeling of oneness or unity in group endeavors, loyalty to larger group, good sportsmanship.
 5. Avoiding repetition of experiences provided in the regular curriculum; e.g., practice in penmanship, typing, or music.
 6. Avoiding the formation of erroneous ideas or false standards of values such as
 - a. Creating wrong impressions about business and business methods.
 - b. Allowing superficial or unbusinesslike methods of accounting.
 - c. Developing snobbishness and conceit among cliques.
 - d. Developing undemocratic or unsocial political practices.
 - e. Developing an unnatural obsession to win at all costs.
 - f. Developing inferior techniques in speech, writing, singing, playing an instrument, etc.
 - g. Excessive participation resulting in neglect of other educational activities, overwork, loss of sleep, etc.
 7. Contributing to guidance and personality development; e.g., helping socially inferior individuals to develop skills in group participation to build up self-confidence.

Good planning and supervision of extracurricular activities involves the reduction to a minimum of waste motion and wasted time in the form of repeating specific types of activities far beyond the point where diminishing returns begin. In the classroom, teachers usually avoid waste through excessive repetition (indeed they are forced to the other extreme). In extracurricular activities, it is a rather common occurrence for students to continue a type of experience long after educational returns begin to decrease.

Good planning and supervision of activities also calls for careful consideration and analysis of the types and relative importance of outcomes. The matter cannot be dismissed by thinking of the results of participation as "training." "Training" must be thought of in more specific terms, that is, as acquisition of information, understanding, interests, ideals, attitudes, habits, or skills. Careful analysis must be made for concomitant outcomes, and they too must be scrutinized, evaluated, and credited or charged to a particular activity.

The better-trained and more successful teacher today does not abandon educational statesmanship to cater to the whims, appetites, and prejudices of the untrained adults of the neighborhood or the untrained and immature young learners. Compromising when neces-

sary or feasible, he steers a firm course toward a long-range educational objective.

The teachers less well trained and those lacking in character tend either to lose sight of educational objectives or to sacrifice them in the interest of expediency or personal popularity. A great many supervisors of co-curricular activities think more of putting on a public exhibition, which is pleasing to the adults and seems to reflect credit upon the "coach," than of the training received by the student participants.

There are other important considerations which if kept in mind and observed in the management of student activities will contribute to greater educational returns. Among the more important are the following :

1. The educational value of an activity is directly proportional to the number of individuals participating.
2. Some individuals need the type of training provided by any given activity much more than others.
3. The importance and values of the activity should be recognized by students, teachers, and parents.
4. Activities must not be dominated and supervised too much in detail by the sponsor or coach.

From these considerations, many suggestions for the conduct of extra-class activities may be derived. Among them may be mentioned the following :

1. Care should be taken that enough activities are provided for all, e.g., not merely one team, or one cast for one play.
2. Participation, particularly in the roles of leadership, should be rotated not only to provide opportunities for more individuals, but to prevent participation by a few students beyond the point where diminishing educational returns result.
3. Care should be taken to encourage individuals most in need of a certain type of experience to participate in an activity likely to provide that type of experience.
4. Those already well trained along certain lines should permit others more in need of particular types of training to participate.
5. Recognition of the importance of activities should be evident in the selection, promotion, and salary of teachers, and in such matters as marks.
6. Teachers should recognize that the educational value of extra-class activities is dependent in part upon the opportunities for planning, initiative, organization, and leadership by the learner-participants. An important characteristic of activities is the

greatly diminished teacher domination and the detailing of supervision and leadership as compared to classroom learning.

The following additional suggestions apply especially to directing club activities.

1. The teacher should give careful thought to the kinds of activities the club may profitably carry on and the way in which those activities may be made most educational.
2. The teacher should meet with committees frequently, especially in the early days of the club, until sound patterns of activity are established.
3. The teacher assists the club in determining the qualifications for its officers but does not bring pressure to bear in favor of specific individuals.
4. The teacher should guide the officers of the club in their thinking but avoid attempting to shape their conclusions too aggressively.
5. The teacher should permit the club, its committees, and its officers to use their own judgment even when their decisions seem not to be the best. The good teacher realizes that such a plan is sound educationally, and should be departed from only in rare cases of fundamental principle and unusual importance.

2. GETTING READY FOR THE YEAR AND THE FIRST DAY

To be most successful the teacher should be preparing continuously for the work of the ensuing year, gathering ideas for making her work more successful, and ordering or making preparation to order equipment, instructional materials, and books, periodicals, pamphlets, and bulletins for the library.

Ascertaining the Nature of Her Duties.—When the teacher accepts a new position, she should ascertain the nature of the work she will be expected to do, what class she will teach, and with what other aspects of the work of the schools she will be associated. She should obtain copies of local and state courses of study, if they are available. She may also obtain city courses of study published by other systems for her subjects or examine those available in the curriculum collection at some good institution. From these courses she should gather many ideas about the materials and methods she could employ to advantage. She should also examine good textbooks in the subjects she will teach, including those employed the year before in the school in which she will teach.

If she discovers that there are areas of subject matter with which she is not fully conversant, she should not only read several text-

books in these areas but also some of the supplementary references, or at least make plans for reading them during the year. If she is to teach in a grade where she has had little training, she should obtain and read at least one and preferably two or three good books on the teaching of that grade.

She should if possible visit the school building to inspect the equipment and the library and other facilities for teaching her subject. If these are deficient in important respects, she should see if they cannot be built up in time for use in the following year.

Learning about the School.—The teacher going into a school for the first time will be wise if she learns a great deal about the school before the year begins. She will wish to learn about the organization of the school, its curriculum, and its plans for management, including such things as :

1. The hours during which teachers are expected to be in the building.
2. How absences and tardiness are reported, recorded, and cleared.
3. The standards and rules for pupil conduct in the halls, in the classroom, etc.
4. The amount of home study, if any, which is expected in the grades she will teach.
5. How and when teachers may requisition equipment and supplies.
6. The rules for operating heating, ventilation, and lighting and for use of janitorial service.
7. What is expected of teachers in matters of public relations, including school publicity.
8. What the plans for fire drill in the building are.
9. The marking system used.
10. Facilities for mimeographing.
11. The provision of textbooks, workbooks, and supplies for students.
12. Special duties : lunch hour, halls, etc.
13. Library facilities and rules.
14. Attendance at school functions.
15. Health service for pupils who become ill or injured at school.
16. Plans for registration.

Among the more useful sources of information about these things are the following : the handbook for teachers, supervisory bulletins and announcements, teachers who have taught there previously, and the principal of the school. If a handbook or supervisory bulletins for teachers have been issued, these may usually be obtained from the principal or superintendent.

Learning about the Community.—The teacher new to a community should acquaint herself in advance or early in her teaching experience with various aspects of community life. She should know how the people earn their living, what the principal industries are, and what types of homes are most common in it. This information will enable her to understand better the background and interest of the pupils and the interest of the parents.

She should discover what the principal religious institutions are, and the degree of sensitiveness to religion the community possesses. She will wish to know something about community attitudes and social practices relative to card-playing, dancing, and such matters. She will want to know what nationality and racial groups are represented in material numbers. She will find it useful to know what cleavages or factional differences are prominent in the community with respect to politics, religion, economic interests, and nationality.

Knowledge of all these things will enable the teacher new to a community to avoid discussions in class or in conversations outside of school hours which are likely to generate much more heat than light and consequently to develop antagonism to the teacher which will handicap her work. It is not intended to recommend that the teacher play up to local prejudices and avoid discussion of all controversial matters, but the knowledge in advance of what matters are the center of deep-seated attitudes and emotions will enable the teacher to avoid innocent stimulation of opposition, to decide what controversial matters are worth discussing despite local differences, and to plan carefully such discussions as are likely to stir up critical reactions in and out of school.

If the teacher knows the factions exist and who the leaders are, it will enable her to avoid remarks which have no special purpose or significance, although this will be unwelcome and will be held against the teacher. Success in teaching is to some extent at least a matter of diplomacy and strategy which must be planned in the light of the local situation.

The teacher should familiarize herself with the potentialities of the community as a curriculum resource, e.g., factories, city hall, police headquarters, hospitals, newspapers, packing plants, historical sites, slums, centers of transportation, and communications activities.

Learning about Pupils.—It is certainly not time wasted for the teacher to acquire what knowledge is available concerning the pupils she will teach during the coming year. Useful knowledge of this type includes :

1. The general level of intelligence of the student population of the school, particularly as indicated by tests of intelligence and of school achievement
2. The general pattern of pupil attitudes and school traditions, which may be learned from older teachers, school publications, etc.
3. Problems that have existed with respect to the general morale in the school, which may be learned from parents, members of the board of education, and older teachers
4. The general level and the spread of pupil achievement in the previous year in the fields she will teach, which may be learned from the other teachers and the school records
5. The names of, and information concerning, pupils with unusual problems, which may be learned from other teachers and the principal
6. The names of the brightest students, as indicated by school marks and intelligence tests or as may be learned from other teachers. To them should be given educational tasks especially adapted to the bright
7. The understanding that comes from a personal acquaintance with at least a few of the youngsters in the community—an acquaintance that begins and develops on a nonschool basis before the opening of school
8. The summer activities of the children of the particular age group which he will teach

The First Day.—School boys and girls are like all other human beings in that they are inclined to make up their minds about another person upon the basis of first impressions to such an extent that it requires much acquaintance of a contrary nature to correct those first impressions. Not only the students, but in small communities parents and others, are curious about new teachers and usually eager to listen to the remarks of the students. It is therefore very important, especially in the case of new teachers, to get off to a good start the very first day.

Among the more important suggestions which are essential to making a good beginning the first day and the first week are the following:

1. Be prepared with as much knowledge of your students as possible.
2. Have the first week's work planned very carefully, but be ready to deviate from the plan as the need may arise.
3. Make definite assignments involving a reasonable amount of definite work to do.

4. Check on the previous assignment very carefully the first week or two.
5. Do not attempt anything spectacular or radical during the first day and the first few days.
6. Do not be too severe or too cordial and informal—be natural.
7. Make careful preparation in advance:
 - a. To see that chalk, erasers, etc., are available if needed.
 - b. To see that any equipment or materials to be used in the way of visual or auditory aids are available and in working order.
 - c. To ascertain if textbooks, workbooks, or other similar needed materials will be immediately available.
 - d. To provide for work to keep pupils busy, especially if textbooks, workbooks, paper, or other equipment is lacking
8. Comment only to a minimum extent about yourself, your standards of discipline, etc. Keep the discussion of both pupils and yourself on the work at hand
9. Avoid any unusual tenseness or self-consciousness. Do your best to feel at ease and confident.
10. It is very desirable to be able to call children by their names as soon as possible. For that reason new teachers and teachers in large schools should prepare in advance for each class on a piece of a cardboard or paper not less than $8\frac{1}{2} \times 11$ the basis for a seating chart, perhaps in the form of intersecting lines forming rectangles, for as many rows as there are and as many seats as in each row. In these rectangles may be written the name of each student according to where he sits. Naturally, the teacher should become independent of the chart as soon as possible. Correct pronunciation of all names should be learned at the outset. If there is any doubt, ask the pupil concerned to pronounce it first.
11. In smaller schools it is well in the first few days or weeks to make a special effort to come to know the student leaders, to call them by name, and unostentatiously to establish cordial relations.
12. If textbooks or supplies are to be distributed, this should be planned and the teacher should know where and when they may be obtained, what records should be kept, and how the students are to make payments or deposits for them.
13. Without ostentation the teacher should give the impression that she knows what she is doing. Excuses and explanations of the reasons for procedure are definitely to be avoided.
14. Care should be taken in planning each day's class with a view to having the subject matter and procedure well in mind including, of course, the assignments.
15. Special attention should be given to seeing that the work of the first week is not dull, though it is not wise to attempt to make the work far more interesting than the work of later weeks will be.

16. Especially in the upper grades the teacher should avoid the extremes of aloofness and of too energetic effort to become friendly and informal at once.
17. In many classes it is useful to ascertain how well prepared the students are for the work ahead. This may be done by means of a formal placement test, by board work, by written assignments, by carefully planned class discussion, or by a combination of these. Ordinarily time should be taken to review only those things in which a considerable number of the students are weak and which are prerequisite to good work in the class. A few individuals may be asked to do a little extra remedial work.
18. The new or beginning teacher should not hesitate to consult immediately older teachers or the principal on any and all perplexing problems, rather than permit a situation to get out of hand or work at a disadvantage.
19. In matters of discipline the new teacher should act with confidence and restraint. Petty infractions should be overlooked the first day or two, but disturbing conduct must be dealt with in a firm way indicative of self-confidence.
20. All reports called for by superior officers should be handed in promptly. Promptness is unusually important at the opening of the year.
21. Be familiar at the very start with general school regulations in order to cooperate with authorities and see that regulations are observed from the start.
22. Reveal a sense of humor and a basically human disposition. (This can be overdone just as severity is so often overdone the first week.)

3. THE TEACHER AND THE COMMUNITY

Learning About the Community.—In the previous chapters it was suggested that prior to beginning her work in a new community the teacher should acquire considerable information about the community in which the school is located—its industries and civic institutions, its religious attitudes, and attitudes about social practices. The gathering of information of this sort should continue throughout the teacher's experience in the community. She should always be in search of opportunities to relate her instruction to the community, using the community as a basis for making verbal instruction more concrete and more meaningful.

Establishing One's Self in the Community.—The teacher should proceed cautiously but definitely and systematically to become a part of the local community. Because of the fact that the teacher's personal

contacts are largely with the children instead of with adults, it is an easy matter to live aloof from the community life. This, together with the fact that teachers new to the community are usually young people, unmarried, and already have other home community connections, makes for the unsatisfactory and somewhat dangerous situation of the teacher living in a community, being a community servant paid with tax money, yet not being a part of the community. No other type of public official would risk such an untoward condition.

The teacher in the small community should attend some local church from the outset even if not a church member, and she should learn the names of adults in the community and form the practice of calling them by name, greeting them and "passing the time of day" with them upon every occasion. The teacher should accept all reasonable invitations to participate in the social life in the community. She should not associate exclusively with other teachers but mingle freely with other persons. Above all, the teacher should attend all meetings of the P. T. A. and should at the meeting greet those whom she has met, meet others, and learn as quickly as possible the names of as many parents of her students as possible. The importance of establishing, maintaining, and extending good public relations is far greater than many teachers realize.

Conforming to Local Standards.—The teacher, like many others in her community, particularly the other professional people, physicians, attorneys, public officials, is dependent for her professional success upon the good will and respect of the people of the community. Every community has its standards of social conduct which it expects to be met. Because of her close association with young people and the fact that high school students and the community youth in general pattern themselves after the younger teachers, the teacher is in a particularly public position. Young people in the community who oppose the wishes and restrictions of their parents by saying, "Why shouldn't I do that or go there? Mr. (or Miss) Teacher does!" are making trouble for the teacher.

The teacher, therefore, must learn what the community standards are. If they are intolerable to her, she should move to another community at the end of the year. She should observe the local standards as long as she is in the community.

With respect to many of these things, it should be noted that the first year in the community is the most critical one. After a teacher has been in a community for several years, particularly if she has made many friends and has a wide acquaintance, she may do and

say things which would be most unwise before she gained acceptance as a member of the community group.

Specific Suggestions.—Particularly in small communities the teacher should observe the following cautions.

1. Be careful not to criticize any individuals in your community. It is amazing how quickly and surely such remarks get to the individual criticized or to his friends.
2. Do not praise individuals except in the manner of seconding praise of others. Enemies of the praised individuals are prone to assume that you belong to the other crowd.
3. Patronize local stores for the very great part of your expenditures.
4. Never speak disparagingly of the community or its institutions, no matter how pitiful they are or how much you hear others criticize. Criticism from the "outsider" is rarely acceptable.
5. Be cautious in speaking your views on controversial matters—particularly if they do not concern your students and the welfare of young people. Do not attempt, particularly at first, to indoctrinate your community.
6. Discuss with your principal and superintendent school and community questions that trouble you.
7. Never criticize and rarely discuss other teachers, your administration and administrative school officials, or the board of education, with others than your very close confidants—and then most cautiously.
8. Be careful at all times to avoid being thought of as belonging to a "faction."
9. Remember at all times that you may be "provincial" and that you must learn to be tolerant and understanding.

Informing the Public.—The teacher should always be alert to the possibilities of contributing to a better understanding of the work of the school. Not only should she cooperate wholeheartedly with the program of the entire school system and that of the building or school in which she is employed, but she should (keeping the principal informed all the while) initiate and carry on public relations activities on her own or together with others of her department.

Among the public relations activities employed successfully by many school departments and teachers are exhibits of the work of the students (handwork, musical performances, student discussions, plays and playlets) before service clubs and other organizations in the community, at county fairs, or in show windows downtown, and stories in local newspapers as well as in the school paper about the work of the students and developments in the school, the new courses, new

equipment, standard test results, special "weeks," school programs, honors awarded to the school or its representatives, assembly programs, athletic interests, special honors, and unusual achievements of individual teachers.

In news stories and in the public presentation of students or of their work it is advisable to observe certain important principles :

1. School administrators should give due credit to students and teachers.
2. Teachers should give credit to students and not monopolize the spotlight.
3. Individual students should not be praised excessively or exhibited conspicuously ; keep the center of interest in the group rather than in any individual.
4. Individual teachers should be careful not to overdo publicity which seems to be boastful or center too much upon themselves.
5. The teacher should learn to write for the newspapers interesting concise copy. Editors and reporters are pressed for time and cannot spare much time for writing school news.
6. The teacher should have a definite understanding with the principal and superintendent as to what kinds of copy should have their approval before sending news items to the newspaper. In some schools all copy goes through the office of the principal or of the superintendent.

4. THE TEACHER AND RESEARCH

Not only is the physician far more completely trained than the teacher, but with few exceptions he continues when in practice to read the results of medical research and findings. There are scores of journals printed in English in which medical research is published. More than 95 per cent of the physicians and surgeons in the United States receive and most of them read fairly regularly the *Journal of the American Medical Association*, in which each week there are on the average approximately ten or a dozen articles and forty or fifty large pages of reports of medical research.

Teachers are generally not well trained in reading reports of educational research, much less in doing research. They do not possess an adequate stock of concepts and terminology in statistical and experimental methods. Many journals publishing educational research insist that the writers of the articles prepare their reports in relatively nontechnical terms. There is, therefore, very little reason for any teacher not to keep abreast of the more important educational research.

Among the more useful media of publication of educational research are the following periodicals, which are here classified on the basis of the relative technicality of the reports published :

Most Technical Journals.—

1. *Journal of Experimental Education*. All fields. Department of Education, University of Wisconsin, Madison.
2. *Journal of Educational Psychology*. Warwick & York, Inc., Baltimore.

Somewhat Technical Journals.—

1. *Journal of Educational Research*. All fields but more articles on elementary education. Department of Education, University of Wisconsin, Madison.
2. *Review of Educational Research*. Summaries of the findings of researchers. Each issue is devoted to a single field, e.g., "The Language Arts." The cycle of fields is repeated each three or four years. U. S. Office of Education, Washington
3. *Journal of Applied Psychology*. Northwestern University, Evanston, Ill.

Nontechnical or Only Slightly Technical Journals.—

1. *Understanding the Child*. A magazine for teachers. The National Committee for Mental Hygiene, New York.
2. *Elementary School Journal*. Elementary education. Department of Education Publications University of Chicago, Chicago.
3. *Educational Research Bulletin*. Ohio State University, Columbus.

Series of Monographs and Bulletins.—Many of the more complete and technical reports of research are published in the form of small books or bulletins. There are several rather important series of such publications including the following :

1. *Contributions to Education*. Principally the reports of researches conducted as doctoral studies. Teachers College, Columbia University, New York.
2. *Supplementary Educational Monographs*. University of Chicago, Chicago.

Books.—Often an investigation is of such proportions that a book of several hundred pages or even a set of several books is necessary to report it. In these categories are :

1. *Appraising and Recording Student Progress*, by Eugene R. Smith, Ralph W. Tyler, and others. Adventure in American Education Series. Progressive Education Association. New York: Harper & Bros., 1942. Vol. III.
2. *Mental and Physical Traits of a Thousand Gifted Children*, by Lewis Madison Terman. Stanford University, 1925. Genetic Studies of Children, Vol. I.

Some volumes contain reviews or summaries of research in a given field. For example, William S. Gray's "Summary of Reading Investigations, July 1, 1941, to June 30, 1942," was reported periodically in the *Journal of Educational Research* (Vol. XXXVI, pp. 401-444).

If teachers feel that they cannot afford to purchase personal copies of these books or subscribe to research publications they should ask

the administration of their schools to buy them for the professional library which the majority of school systems now have.

Changes in Attitudes Toward Research.—Principally through the researches of Thorndike and Terman and their graduate students in the first quarter of this century many reliable and valid means of measuring intelligence and educational achievements have become available. Statistical and research methods also have become more generally understood and appreciated. As a result, not only has the amount of reliable knowledge about education procedures vastly increased, but a great body of unsound beliefs and practices based upon authoritative and dogmatic speculation has been discredited and abandoned.

Prior to these developments much research on education was of a very amateurish and unreliable nature as the result of the following types of weakness and limitations :

1. Measurements provided measures of only part of the educational results.
2. The measurements employed did not measure growth. They measured only final status and did not take into consideration status at the beginning of the experiment.
3. Nonexperimental factors, e.g., intelligence, special abilities, and learning which resulted from sources outside the experimental setup, were not adequately controlled.
4. The statistical methods employed were inadequate or inappropriate.
5. The interpretations of findings were not skilful and sound.

Those well trained in research became so busy directing the research of others—chiefly candidates for master's degrees who were not competent to do research and usually not much interested in doing it—that they did little painstaking research themselves. Promotions, particularly in college faculties, came to depend largely upon the number of research articles published. A premium was placed not upon the quality of research but upon the number of published titles. Ambitious young instructors could not wait for promotion until long-term careful research investigations could be completed.

These factors contributed to a lessening of respect for and confidence in educational research. In addition many teachers were not trained to read technical research. Many others found courses in statistical and research methods difficult and distasteful. The natural tendency was for all these groups to rationalize—to pooh-pooh research and to forget about it. In this they were aided and abetted by

college teachers of education who were themselves untrained in research and statistical methods and found their positions of leadership insecure.

Still other factors operated to cause teachers to neglect research. A considerable number of teachers colleges, established and expanded in times of a greatly increasing demand for teachers, found that, as enrollments in the schools reached the saturation point, they must make these courses easier and more interesting. Statistical methods and research are not easy and are usually of interest only to the better trained and more capable. At the same time, the Progressive Education movement in many places fell into the hands of superficialists, institute and convention entertainers, and butterfly chasers. It attracted and consoled a great many of the more emotional, less intellectual, and nonscientific-minded teachers. The loose thinking of superficialists who would substitute high-sounding phrases for painstaking thinking and hard work resulted in educational bankruptcy.

More recently a counter trend of sanity has asserted itself. It has been recognized that the educational progress of young people was suffering. The war has also counteracted to some degree the national tendency to seek the cozy and soft and to avoid the rigorous. Today there is less and better research. Today there is a definite trend to the conduct of sound research and the reading and application of its findings.

Characteristics of a Good Experimental Investigation of Learning.—Teachers who have not had courses in research methods, in measurement, and in statistical methods should at their first opportunity take such courses. Until they can take courses in these fields, they should read an elementary book on each of these subjects. Three of the suitable books are mentioned:

1. Sorenson, Herbert. *Statistics in Education and Psychology*. New York: McGraw-Hill Book Co., Inc.
2. Rugg, Harold. *Primer of Graphics and Statistics for Teachers*. Boston: Houghton Mifflin Co.
3. Garrett, Henry E. *Statistics in Psychology and Education*. New York: Longmans, Green & Co.

From training in research methods, measurement, and statistical methods the teacher will learn to recognize the characteristics of a sound experimental study of learning and of teaching procedures, including the following essentials:

1. Employment of a control group of learners comparable to the experimental group and of the same degree and pattern of dis-

tribution of ability, educational status, and ability to learn, and of equal status with respect to the things to be learned. Comparability is usually measured by

- a. General intelligence test, mental age, and intelligence quotient
 - b. Tests of information, skills, understandings, habits, or other outcomes to the development of which the experimental learning experience should make material contribution
 - c. Marks and ratings by former teachers
2. Control of factors, other than the method or materials being investigated, likely to influence growth of the students in the areas of the more important outcomes. e.g.:
 - a. Age
 - b. Sex
 - c. General home environment
 - d. Relative skill of the teacher or teachers, both in general and with particular respect to the experimental and control methods and materials
 - e. (Of great importance) opportunities to learn elsewhere, i.e., stimuli, outside the experimental group, to the development of the outcomes to be measured
 3. Selection (or development) and use of reliable and valid measures of growth outcomes during the experimental period. (These measures should grow out of the experimental method and materials and should not be mere subject-matter information tests. Measures should be expressed in terms of units which are reasonably equal and comparable, so that growth as indicated by final and initial scores of 60 and 40 respectively will be equivalent to growth as indicated by scores of 70 and 50, or 45 and 25.)
 4. Appropriate statistical treatment, for example, determination of the statistical reliability of whatever differences are found, including the extent to which they may be the result of unreliability of the measures of growth or chance errors of sampling (if coefficients of correlation are employed they should be appropriate, e.g., not linear for nonlinear data, and they should be carefully interpreted).
 5. A painstaking and logical interpretation of the data and the findings, sufficient to pass the following tests:
 - a. Were all the more important possible outcomes adequately measured?
 - b. Were experimental and control groups approximately equivalent in ALL the important regards that would likely determine the amount of growth during the experimental period?
 - c. Were all nonexperimental factors likely to influence growth during the experimental period eliminated or so controlled

as to produce equivalent effects upon the two groups, e.g., learning from outside sources or the relative lack of experience of the teacher with the experimental methods?

- d. To what extent could the differences discovered or the fact that no significant differences were discovered be attributed to chance?
- e. Were the general conclusions of the study applicable alike to bright, dull, and average learners? to boys and to girls? to younger and to older learners?
- f. To what extent could the conclusions be applied to other classes? other subjects? learners of other ages? learners in other types of communities? learners in schools employing different methods?
- g. To what extent were the experimental results affected by attitudes, which were not typical or permanent, of the learners or of the teachers?

Cooperative Research.—In many of the larger cities investigations are being carried on under the leadership, planning, and direction of competent investigators. Under their direction teachers assist by cooperating in the course of their regular duties or by serving on committees or in other capacities as their training and ability qualify them. These investigations usually deal with such subjects as (1) learning, (2) course of study development, (3) individual problem pupils, (4) construction of measuring instruments, and (5) achievement, pupil adjustment, home environment, community conditions, employment opportunities, and the like. Many of the more desirable positions in larger school systems are open only to those with training, interest, and capacity to carry on or to assist in any way in carrying on investigational or creative research.

QUESTIONS, PROBLEMS, AND EXERCISES

1. Add one or more suggestions to those given for "Getting Ready for the Year and the First Day." Which ones of those given do you think are of greatest value?
2. Make a list of all the more important things a teacher should endeavor to learn about the community and where she could find each.
3. What, in your subject, could you exhibit or bring to the attention of the community as a means of helping the public appreciate the work of the schools?
4. Find at least one issue or copy of the periodicals and books mentioned in connection with research and select several good research reports of interest to you.

5. Make an abstract in about 500 words of a research report. Include objectives, techniques, sources and nature of data, findings, and conclusions.
6. List several important weaknesses found in research investigations.

Chapter 22

PROFESSIONAL AND BUSINESS PROBLEMS

1. GETTING A POSITION

Teaching as a profession has among others two very attractive characteristics. Except in most unusual times it is not difficult to obtain a position, and there is more than average security in one's position. In times of economic depression there is usually a surplus of teachers. However, even in such times the possibilities of getting a position are good. There is always a demand for young, well-educated teachers with good personalities.

In prosperous times there is a scarcity of teachers. During World War II a critical shortage of teachers developed, and more than 15 per cent of all teachers in this country taught on emergency certificates issued to legally unqualified persons. Doubtless there will not be until late in the 1960's enough qualified teachers to fill the demand. As the result of the greatly increased birth rate throughout the 1940's, there will be throughout the '50's and perhaps well into the '60's a greatly increased school enrollment calling for hundreds of thousands more elementary school teachers and school administrators.

Criteria for Evaluating Positions in Education.—Hence the problem is not so much one of finding *a* position as finding the best one possible. What constitutes the best one possible for any given individual depends upon a number of factors, prominent among which are the following:

1. Amount of annual salary and the pattern and maximum of the salary schedule
2. Opportunities for, and assurance of, advancement financially and otherwise
3. Cultural advantages of the community—musical, dramatic, and social
4. Mores, customs, and conventions of the community
5. Location of the community with respect to larger cities of unusual cultural and amusement opportunities
6. Quality of places available for the teacher to live

7. Quality of professional leadership in the school and the school system
8. Nature and amount of work required of the teacher—number of classes per week, extracurricular duties, etc.
9. Physical climate of the community
10. Opportunities for a satisfying social life; and for unmarried women teachers, the relative number of desirable and eligible young men in the community
11. Proximity to large and attractive school systems in which promotion may be found
12. Degree of adaptation of the subjects taught and other responsibilities to the preparation and the interests of the individual teacher
13. Requirements for promotion, e.g., summer study or travel
14. Security in position and certainty of tenure
15. Financial considerations other than salary: retirement plan, sick leave, health and hospital insurance, etc.

In applying for and in considering offers of positions, one must investigate the school and the community with respect to most of these criteria, attaching to each item a weight proportional to its importance to the individual seeking a position. Ordinarily a teacher should visit the community and the school, particularly if it is in session, before making a final decision. She should discuss the school and community with the placement bureau if she is notified of the position by a college placement agency. She should attempt to discover what one may expect in other communities in which she is likely to be considered for a position.

Avenues for Placement.—Among the avenues through which teachers find positions, those most commonly employed are:

1. The placement bureau of college or university from which she has a degree (Such bureaus usually charge a small registration fee.)
2. Commercial teachers' agencies, which usually charge a fee of 5 per cent of the first year's salary
3. Independent application to the superintendent of schools of a city in which the applicant has no other contacts
4. Independent application to the superintendent of schools in a community in which the applicant has relatives or personal friends either in or outside the school system

No matter what the avenue of approach, if the teacher really wants the position involved, she should exercise care and judgment and cooperate closely with those seeking to help her.

It is ordinarily advisable to be registered with a college placement

bureau every year that one is not certain that she should or would like to remain in her present position. Usually one is notified of many desirable vacancies. The costs are small. It is better to have one's credentials, including copies of one's recommendations or "references," sent to an employing official by a third party than to have the employing official write to the individuals given as references. The latter tend to forget the applicant as years pass, or may be temporarily or permanently at some place other than the address given. One should keep her appointment bureau papers up to date, adding new references and additional data relating to her experience, education, and honors, and every few years supplying new pictures.

If the avenue is a placement bureau or agency, the following suggestions are valuable :

1. Furnish the bureau with accurate and complete information.
2. Supply the bureau with suitable photographs.
3. Follow faithfully the instructions given by the bureau.
4. Be prompt in making a written or personal application if instructed to do so.
5. Offer to call for a personal interview and visit to the community if the distance and expense involved are not great.
6. In furnishing references give names of educators, particularly those who have seen you teach, and only one or two names of ministers or personal friends or friends of the family.
7. Keep the placement bureau informed in regard to change of address and status.

Written Applications.—The following are suggestions for written applications :

1. Write in legible longhand. Typewritten letters are appropriate if they are done expertly.
2. Be careful of correctness in all details of form, e.g., punctuation, grammar, paragraphing, beginning and closing of letter. Avoid abbreviations.
3. Unless instructed to do so, do not write a long letter of great detail.
4. Unless instructed to the contrary, always address letters to the superintendent of schools, never to members of the board of education.
5. Do not write on the stationery of a college fraternity or sorority, or on colored or scented stationery. It is preferable to use unfolded plain sheets of large size.
6. If one is not registered with a placement agency, one must give complete pertinent information. Describe education in concise

form, in chronological order and under appropriate headings, as in following fictitious example:

Education

Graduate of Moberly, Missouri, High School, 1940
Attended Central College, Fayette, Missouri, 1940-1942
Attended University of Missouri, 1942-1944; B.S. in Education, majoring in elementary education
Attended University of Colorado, summers 1944 and 1945, ten weeks each, taking graduate courses in education, history, and psychology

Experience

Teacher of 3rd grade, Bolivar, Missouri, 1944-1946
Teacher of 4th grade, Burlington, Kansas, summers, 1946-1948
At present, principal of Woodrow Wilson Elementary School, Coffeyville, Kansas

Honors and evidences of leadership

President of student body, Moberly High School
Secretary of sophomore class, Central College
Member of Kappa Delta Pi, professional and honorary fraternity, University of Missouri
Chairman of Classroom Teachers Association, Burlington, Kansas

Extracurricular activities

Debate and glee clubs, Moberly High School
Dramatics, University of Missouri
Taught Sunday school class, Presbyterian Church, Bolivar, Missouri and Burlington, Kansas

References

Mr. Harry S. Jones, Principal, Moberly High School
Professor Edith Small, Central College, Department of English
Professor W. W. Sawyer, University of Missouri
Professor R. K. Whithaus, University of Missouri
Superintendent J. K. Robinson, Bolivar, Missouri
Superintendent W. D. Costello, Burlington, Kansas
Superintendent H. S. Marigold, Coffeyville, Kansas

Age and birthplace should always be given, and usually height and weight. Religious affiliation need not be given unless requested, although it may in some instances be quite important.

In the great majority of larger school systems, blanks are available by means of which this information and other desired data may be submitted. It is usually well to write first a short explanatory letter asking for an application blank. In case no blank is available, one may choose between having a college placement bureau send one's papers or writing out the information indicated above.

The Personal Interview.—Ordinarily one's chance of obtaining a desired position is better if one has a personal interview. Most employing officials do not seriously consider any but most unusually desirable applicants without a personal interview. While a personal interview must be adapted to the particular interests, tastes, and prejudices of those concerned, there are nevertheless a few general principles which usually should be observed. Some of these are presented in the following paragraphs.

In the interview, *the applicant should permit the employing official to determine the course and scope of the interview* and to do most of the talking and questioning.

The applicant should answer fully the questions she is asked but should not consume too much time in doing so, and she should not discourse at length on matters in which the employing official has not indicated an interest for information. Excessive verbosity and aggressive salesmanship are usually detrimental.

The applicant should be at ease, pleasant, relaxed, not too forward, confident but not egotistic, and at least reasonably natural.

The applicant should rarely if ever "play up" to the employing official or to what she has been told are his pet "ideas." If anything is done in this direction it should be done most skilfully and quite subtly. The applicant should not agree too enthusiastically with the employing official and certainly should not argue with him. If she feels that the employing official is taking a stand she does not believe in for the purpose of drawing out the applicant—which sometimes happens—the latter had better express a mild doubt or let it pass.

If the applicant is asked her opinion on a matter, she should be frank and honest, somewhat conservative, and not too positive in regard to matters about which she is not absolutely sure of her opinion.

The applicant should in a modest way ask for information about the position, the school, its philosophy, its organization, the community, opportunities for advancement, etc. She should have thought through in advance just what information she wants most. Her requests for information should come late in the interview. Only if the employing official is obviously attempting to persuade the applicant to accept the position can the applicant seem to be the one to be pleased. Nevertheless, not only should the applicant obtain the important matters of information from some source, but intelligent questions indicating also professional interest and orientation, if not overdone, are likely to put the applicant in a favorable light.

The applicant should study carefully what would be the most appropriate attire and toilet, realizing that while attractiveness is important,

there is great variation in the tastes of employing officers and of communities with respect to teachers.

2. GETTING A BETTER POSITION

Suggestions for Getting Better Positions.—Ordinarily it is desirable and fair to the school and its students for a teacher to stay in a position at least two years and to leave only if a definitely better position is offered or if her work is not proving reasonably successful. There is much waste incident to changing positions. In the first year in a new position, the teacher is somewhat at a disadvantage by reason of her lack of knowledge of the students and of the philosophy and conventions of the school and community. She is "learning the business" to some extent. Unless an unusual opportunity presents itself, she is almost compelled by professional ethics to stay a second year, if desired.

From the point of view of the teacher's interest she should not move too often. Employing officials are usually suspicious of applications from individuals who have moved from school to school with only a year or two in each place unless there is definite evidence of a good promotion with each move. Then, too, there is always the risk that for some reason or other, or for no reason at all, the teacher may not be as successful in the new position or may not like her new community as well.

Agencies and Avenues.—When she decides it is time to seek a better position she should canvass the agencies and avenues available. Prominent among those are:

1. Her college placement bureau
2. A placement bureau operated by the state education association
3. If she desires location a considerable distance from her own state, a commercial agency in the region to which she wishes to go
4. Application to superintendents of schools in systems of a size to which she can reasonably aspire, and in regions where she wishes to live. (Directories containing the names of superintendents of schools may be obtained at low cost from the U. S. Office of Education in Washington and from the offices of state superintendents of schools.)

Her chances of success are improved if the applicant attends and takes part in county institutes, state conventions, and meetings of teachers of her field; if she belongs to her state educational association; and if she reads several professional journals, thus keeping up with

trends in educational thinking and practice. Her chances of getting a good position are also increased if she has written articles for publication in professional periodicals or if she has attended summer school at a well-recognized college or university. Naturally, her chances for promotion are increased, particularly for administrative positions, if she has a master's degree in her chosen field of work.

References.—In the case of the experienced teacher, the quality of her experience is the most important factor in her getting a better position. Obviously then she should have avoided all unnecessary conflicts with her principal and superintendent and all criticism of them and the school. She should have developed as far as possible the good will and respect of as many students and members of the community as possible. If she has a record of intelligent, effective cooperation, she is in a fortunate position.

Some of the persons by whom she must be considered for a better position will be greatly interested in her references and their statements in regard to the quality of her work. She should first inform those from whom she must get references that while she is happy in her present work she naturally would like to get a promotion from time to time and that she would be most appreciative of anything that is done for her. She should discover whether the principal or other potential reference *thinks highly of her work and whether he would be willing to have his name used as reference.* Perhaps too, she should ask his advice and help in getting a better position. If there is any doubt about the willingness of the person to whom she would refer to give her a very favorable recommendation, she should not list that individual's name.

Locating Lucrative Positions.—Relatively well-paid positions are to be found in large numbers in certain places by persons properly qualified. Higher salaries are usually found in the cities than in smaller places and in the wealthier states (New York, California, Pennsylvania, Connecticut, Massachusetts, Ohio, Illinois) than in the less prosperous ones. To obtain positions in these places, the teacher should make application before she is past 35 years of age. One must get "in" fairly young and be promoted within the system. That means making good in the first six or eight years of teaching and improving oneself professionally by reading, experimentation, hard work, self-analysis, and attendance at summer schools at least until the master's degree is attained.

The teacher should not forget that extra-classroom activities and contacts are very important. She should be liked and respected by

the people of the community in which she is living and she should be a valuable citizen in it.

The teacher who wishes to get ahead should think of the possibilities of a specialized service as supervisor, counselor, psychologist, or the like. Men should think of administrative positions if suited to that kind of work. Most men of good minds and fair personalities make successful administrators in spite of their original doubts about this type of position and should prepare themselves for a principalship or superintendency. There are also thousands of positions in teaching and administration with manufacturing and sales concerns of all sorts, including book companies. There are more than 100,000 positions in colleges and teachers colleges. For most of these a doctor's degree is a prerequisite.

3. CONTRACTS AND SECURITY

Permanent Tenure.—With respect to the security one has in one's position there are three principal categories of positions: (1) those covered by permanent tenure, (2) those involving continuing contracts, and (3) those under ordinary teaching contracts. The greatest security is in those places in which what is called permanent tenure is in effect. The typical tenure law provides that after a period of three years from the time when the teacher has entered the service of the school district, she may not be discharged without cause and without a hearing or trial, if she demands it. In many districts the causes for dismissal are named. Usually they include immorality, incompetence, and insubordination.

Permanent tenure provisions were sought eagerly by teachers' organizations for the purpose of insuring teachers against fear of dismissal for political reasons or because of prejudices on the part of superior officers, or members of the board of education, or because of pressures from influential individuals or groups seeking the dismissal of teachers for reasons other than their relative professional competence. In operation, permanent tenure, together with mechanical salary scales which do not recognize merit but guarantee all teachers automatic salary increases at stated intervals, has operated in the case of too many teachers to remove incentive for growth and for rendering a high quality of professional service.

The bad effects of permanent tenure have become increasingly great in recent years. Because of the decrease in the numbers enrolled in teacher education schools and the increased tendency for teachers to remain in teaching, many schools have become saturated with older teachers who are in poor health, have suffered a weakening of mental

powers and personality, and show little interest in keeping up professionally. While it is desirable that these older persons (and not all of them are superannuated) be employed at something and enabled to earn a living, it is a tragedy that they be imposed upon youngsters in the schools with all the ill effects that are certain to result from their close association with, and domination by, relatively incompetent teachers whose personalities have deteriorated because of bad health and poor mental hygiene.

Bad Effects of Insecurity.—On the other hand, unless there is some very definite assurance of tenure, the retention of teachers will tend to be on the basis of their political affiliations and activities and their personal connections. These conditions exist today in many places where there is no permanent tenure. Likewise, in schools where there is no provision for tenure, the schools and the students are subject to pressure groups who wish to influence what is taught in the schools for their particular purposes, and to the whims and prejudices—religious, personal, and otherwise—of school board members, influential members of communities and not infrequently of school administrators. It is clear that schools, teachers, and pupils must be protected from such influences.

While only a minority of teachers are dismissed unjustly or illegally, there can be no doubt that the great majority of teachers are influenced a little, many a great deal, in deciding what and how to teach by the fear of offending ignorant or selfish individuals or groups in the community. If the schools are to render anything like their maximum service in education for intelligent democracy, these restrictions must be at least relaxed if they cannot be entirely removed.

The Continuing Contract.—In recent years the “continuing contract” has been gaining ground both in theory and in practice as a substitute for permanent tenure. The continuing contract now required by law in some states and employed voluntarily by an increasing number of districts possesses the following characteristics :

1. After a probationary period, usually two or three years, the teacher is on indefinite tenure until dismissed by a majority vote of the members of the board.
2. Official notice of dismissal in writing must be given the teacher, if she is not to be retained, not later than a specified date in the spring, usually a designated date in April.
3. The teacher is entitled to be informed of the reasons for her dismissal and, if she demands it, to a prompt hearing before the board.

The continuing contract has several very important advantages. They may be summarized as follows:

1. The teacher is not required to seek reappointment annually.
2. Dismissal requires a positive action by a majority of the members of the board—not merely a majority of those present at a meeting.
3. The teacher may require a hearing and a statement of the reasons for her dismissal.
4. The teacher must be notified in time so that she may have a good chance to obtain another position.
5. The teacher must be notified before she leaves the community at the end of the school year and may confer with the administrative officers and members of the board before the end of the year and may inform members of the community, thereby preventing the board from keeping the news of the dismissal from the community to which it should be responsible.
6. It does not require the board to prove incompetence, immorality, or any other legal cause for dismissal and hence does not operate to insure permanent tenure. It does make dismissal more difficult than under the annual contract plan and guarantees better conditions of dismissal.

Many administrators object to one feature of the plan, namely that the requirement of early notice may give the dismissed teacher an opportunity to stir up in the community opposition to the board's action of dismissal and that she may from the time of the notice of dismissal be a liability rather than an asset to the school. In practice this objection has not proved in a great many cases to be a serious one. The dismissed teacher usually does not wish to advertise the reasons for her dismissal and is usually wise enough not to behave in a manner so unprofessional as to handicap herself in obtaining another position.

The Teacher's Contract.—The contract between teacher and board of education should specify clearly (1) either the annual salary to be paid or the monthly salary to be paid for a specified number of months in the year, and (2) the general nature of the duties to be discharged, e.g., as a teacher in an elementary school, as an elementary school principal. All other provisions, such as requirements to swear loyalty to the Constitution, or to refrain from teaching certain doctrines, should be looked upon with great suspicion, as should provisions relative to community duties, place of living, membership in organizations, or any restriction of any type on the full rights and privileges of a free citizen.

A teacher's contract is a legal agreement equally binding upon both parties. In recent years the practice has grown among teachers of requesting release from a contract in order to accept a better position. School boards have rather generally released teachers from their contracts under such conditions. While in many instances this has not been in the interest of the schools represented by the boards, they have felt that they do not wish to go to the expense and trouble of bringing suit for the enforcement of the contract. At best they could retain for probably not more than a year the services of an unwilling teacher.

It seems unethical for a teacher to refuse to fulfill her contract if the board is not willing to release her, particularly if it is near the beginning of the school term and the chances of employing a competent teacher are not good. The very fact that the teacher has been given the security inherent in a contract is a benefit to be taken into consideration. The employing officer who induces a teacher to break her contract with another employer not only is likely to obtain a teacher of questionable reliability, character, and sense of responsibility, but is also legally liable for inducing a breach of contract.

4. ECONOMIC PROBLEMS

Savings and Insurance.—The need of a teacher to save money will vary with the individual, as the ability to save will depend upon her income and necessary expenses. Without doubt, however, a teacher should save something from every month's salary. The beginning teacher must learn that nine months' salary will have to cover twelve months' expenses and that ordinarily at least a third of each month's salary must be saved. In addition other savings must be begun early: savings for further education, for marriage, for children to come, for insurance against illness and accident, and for retirement.

Since illness or accident may come at any time, the wise teacher will purchase health and accident insurance at the beginning of her professional career. If that type of insurance is available through the state association of teachers, it is most likely to be safe and the cheapest obtainable. If not, she should investigate the possibility of group insurance in the local school system. If neither of these is available, she should investigate other possibilities, deciding finally upon a company which is large enough to be safe and which gives low rates to teachers. A teacher is a preferred risk with respect to accident insurance.

Whether or not the teacher needs life insurance depends upon whether she has dependents for whom she wishes to provide. Despite the sales argument that anyone should take out life insurance while she is young because the rate is lowest then, there is not in the authors' opinion any need for life insurance until one has a dependent, and the amount paid for protection until that time is in large part an unnecessary expense. If life insurance is available through the state or local education association, it is most likely to be the most economical form she can buy.

Retirement.—Almost every state has some form of provision for teachers' pensions or retirement allowances. Whether or not the state or the local school district contributes to the fund, it is with rare exceptions the best plan for retirement available to the teacher. Only under unusual circumstances can a teacher afford not to participate in whatever state or local plan is available. In such plans there is no expense for advertising, salesmen's commissions, or other similar costs, and this usually effects a saving of from 10 to 15 per cent of all that is paid in in the form of premiums.

In some state teacher retirement plans, there is a provision that teachers leaving the state forfeit what has been paid in. This provision, which exists in only a few states, should deter a teacher who thinks there is considerable possibility that she may leave the state. For those who remain in the state the plan is advantageous.

The teacher may combine provisions for retirement with her life insurance by taking out the type of policy which is referred to as an endowment policy. By its terms the amount of the insurance is paid in full to the insured at the end of a given period, e.g., thirty years, if she is alive or to her beneficiaries if she dies before that time. The premiums for such endowment insurance are higher than for ordinary life insurance.

"Annuity" policies for old age should be considered carefully, especially when the teacher is able to save more than a minimum amount. The annuity agreement provides for the payment of a set sum per month from the time of arrival at an age stated in the policy, e.g., 65 years, until death. A teacher paying in ten dollars a month from the age of 25 should be able at present interest rates to receive approximately \$100 a month from the age of 65 until death.

Investments.—Rarely should teachers make investments other than in real estate, insurance, annuities, or government, municipal, or other high-grade bonds. Not until the teacher is wealthy enough not to be badly hurt by material losses should she buy stocks or ordi-

nary commercial bonds. Unless she has money which she can afford to lose, she should not yield to the temptation to profit by increase in the value of stocks or by the prospect of high rates of dividends or interest. On the whole to all but those who are in a special position to know what and when to sell and buy, the losses over a period definitely exceed the gains from owning any securities except high-grade low-return bonds and the very safest of stocks. Like slot machines and all other instruments of chance, speculative stocks pay to the amateur investor much less than he pays for them.

Teachers should also be especially wary of loans to relatives, friends, or anyone else, and of acting as guarantors of notes. A high percentage of such transactions end in losses and broken friendships. A policy of no loans, established early and adhered to strictly, is not only wise but enables one to say "no" without embarrassment.

The teacher should avoid borrowing as long as possible. If absolutely compelled by unfortunate circumstances to borrow, the teacher should always calculate the rate of interest on the loan. A legitimate maximum rate of interest is 6 per cent. Loan companies usually charge 15, 20, and frequently as high as 30 per cent. The best place to borrow is a local bank where one is known. If one is unable to borrow there, it would be better usually to do the best one can without borrowing.

Other Sources of Income.—Because of the low salaries in many places and the fact that teachers are free during Saturdays, late weekday afternoons and evenings, and in the summer months, many teachers seek additional employment and some invest in business enterprises. For teachers of inadequate education or of inferior teaching ability there is no alternative. For most others, their spare time would be better spent in additional education, in reading and study, or in other preparation for the performance of better professional service from day to day, thereby building toward a better position and a larger salary. This is particularly true with respect to employment during the school year and during the summer until the master's degree is obtained.

After the master's degree is obtained, summer employment may in many cases be a professional asset, particularly in the case of teachers of business or of other vocational subjects if their employment is in the field of their teaching. Employment of many types serves to orient "ivory tower" teachers with respect to the problems of the laboring and business world, and the association with adults in industry serves to offset the teacher-pupil life in the schoolroom.

Buying.—Installment buying is in reality buying and borrowing in one and the same transaction. Usually handling charges and the rates of interest on unpaid balances are high. They must naturally be high to cover costs of collection and bookkeeping and to cover the losses on bad accounts. The smart teacher, in view of the low level of teaching salaries, makes certain that her money goes as far as possible, and this excludes installment buying.

The teacher must learn early a few simple things about the business she patronizes. In all but large cities she should patronize local merchants for the great part of her purchases, just as most others in the community do and for the same reasons. The teacher's salary comes from taxes paid largely by the commercial interests of the district, and her civic spirit is judged by her community loyalty. The esteem with which she is held in villages and small cities is in some proportion to the degree to which she is a good customer. She should, therefore, distribute her patronage wisely, and principally among local merchants, for the goods and services she needs.

QUESTIONS, PROBLEMS, AND EXERCISES

1. What are the effects of a depression upon opportunities for positions in schools?
2. Select a community in which you would like to teach and rate the community on the points usually considered in judging a community.
3. If you were to register with a teachers' employment bureau, what five persons would you give as references? Why that five?
4. Write a letter of application for a position in a nearby school system.
5. Add two suggestions to the list in this chapter for consideration by an applicant in an interview when applying for a position.
6. What are the points usually covered in a teacher's contract?
7. Compare the continuing contract with permanent tenure from the point of view of the teacher and from the point of view of the school.
8. Why should a teacher have freedom from interference in regard to what she teaches? What is the teacher's responsibility in the matter?
9. What is a loyalty oath? Why do some legislators occasionally try to get a law passed requiring a loyalty oath? Why do teachers usually resent the attempt?
10. What organizations in a community are most likely to interfere in the curriculum of the schools and why?
11. For a teacher on a salary of \$2600 a year with one dependent, what would constitute a good program of insurance and saving? If she has no dependents, in what respects would the program be different?
12. What are the principal arguments for and against a teacher's taking nonschool employment in the summertime?

Chapter 23

IN-SERVICE EDUCATION OF TEACHERS

1. THE NEED FOR CONTINUED TEACHER GROWTH

The acquisition of knowledges, attitudes, and skills essential to effective teaching is dependent upon a suitable preservice education supplemented by continual growth throughout a person's teaching career. For many teachers the challenge to constant growth is impelling. By the nature of her work the teacher is in an advantageous position to continue her education. Therein lies one of the main attractions of the teaching profession. In-service education programs while focusing upon the problems of children are designed to facilitate teacher growth.

In subsequent sections of this chapter, a few of the reasons for in-service programs of education for elementary school teachers will be briefly discussed.

Inadequacy of Preservice Education.—In an effective preservice program of education for teachers the elements of general education and the foundations of professional orientation can be provided. The feeling of responsibility inherent in an actual teaching situation is difficult to produce at the preservice level. In an in-service education program, discussions of principles of learning and teaching can more readily be linked to the realities of a classroom environment. The need for an in-service education program would still exist even with improved programs of teacher internship. As in other professions it is too much to expect that, in one short period of training, it is possible to provide teachers with the education needed for a lifelong professional career. Education provided in the preservice period of preparation must constantly be supplemented by individual and group efforts. While more realistic education programs can contribute greatly to the teacher's preparation, many of the understandings needed can only be acquired by firsthand experiences with children and adults in school and community life.

New Developments in Teaching.—Recent studies of human relations and social progress have revealed principles which have far-

reaching implications for school practice. A significant development in social processes has been the development of the technique of democratic group discussion in which leadership is not on a *status* basis but changes from one member to another in terms of each participant's contribution to group thinking. The perfection and use of this method may easily revolutionize pupil-teacher as well as teacher-supervisor relationships.

Modern psychology has provided new insights into child development and growth. In fact, many psychologists insist that if teachers were to utilize our present knowledge of human behavior effectively our schools could produce well-adjusted individuals free from frustrations and useless fears.

Many school practices in regard to marks, examinations, and pupil discipline are far behind our present knowledge of rational human behavior, mental health, and motivation. Many of the present plans of organizing and presenting instructional materials are based upon the generally discredited stimulus-response psychology. Methods of teaching involving drill upon meaningless, isolated, and unrelated bits of subject matter are based upon the same outmoded theory of psychology. The potential value of new instructional material such as audio-visual aids has not been clearly perceived by teachers.

Recent developments in community-centered schools chart the path away from educational programs isolated from the realities of living. New instruments designed to measure the outcomes of teaching in terms of attitudes, interest, and ideals, rather than the mastery of subject matter, present a fruitful field of study for groups of teachers. Techniques of diagnosis have been devised which make it possible for the teacher to study the child against his background of home and community life. Sociometric techniques make it possible for the teacher to study child group structure, thereby providing an insight into the child as a member of a functioning social group.

Changing Conditions in Society.—Much has been written in regard to the dynamic character of society and the resulting lag between education and life. Change is constantly being accelerated, especially in the areas of communication, transportation, and progress in science. There is good reason to believe that once momentum is established in social affairs it can be accelerated in a manner comparable to the acceleration in natural science. New developments in human relations threaten to rival progress in the mechanical realm. The deepening sensitivity to human needs has found expression in more attention from leaders of government. The movement to estab-

lish a world government is gaining momentum among informed persons who sense the futility and dangers of national jealousies and rivalries. The ever-increasing interdependence of peoples makes new social processes compulsory. Mankind is slowly acquiring a new set of moral values. The common man is emerging to demand respect for human personalities regardless of race, creed, or color. This is the essence of democracy. Political democracy represents only one aspect of the democratic way of life. The economic and social aspects are equally important. In order for the teacher to assist pupils to experience democracy in their school relationships the teacher herself must experience it in her relationships with other teachers and school administrators.

In-service education programs can contribute to the teacher's orientation to the world scene. In some curriculum revision programs, the participants have spent the first year in an analysis and interpretation of the social forces which affect the thinking and behavior of people. A good point of departure is a study of conditions in the local community and participation in its affairs.

Changing Status of Youth.—New social and economic factors in our society have influenced the behavior of youth to an even greater degree than they have affected that of adults. The feelings of uncertainty and insecurity prevalent in the present-day world are reflected in the thinking of children and youth.

The bewilderment of youth resulting from the complexities of modern occupational and social life can be dissipated by teachers who understand the impact of the kaleidoscopic world upon youth. As stated by Biber and Snyder,¹ the role of the teacher might be stated as follows:

In her role as a teacher, she has to maintain an intricate system of delicate balances between: giving support, sympathy, comfort, protection and nurturing reliance, independence, and growing up; clearing away confusion, being the agent of reality and remaining sensitive to the importance of phantasy in wholesome growth; allowing a full measure of freedom from restraint and prohibition and establishing clear limits and boundaries of acceptable behavior; being efficient, orderly, careful and not becoming rigid, exacting, and executive, being soft, understanding, yielding but not sentimental or sloppy.

Emerging Concept of Education.—Education has acquired different meanings from one generation to another. Today the school has undertaken the task of the all-round development of "all the children of all the people." The emphasis upon the whole child as a

¹ Barbara Biber and Agnes Snyder, *How To Know a Good Teacher*.

self-directing member of society has resulted in the introduction of new instructional materials and procedures. Both the scope and variety of teaching materials have been greatly expanded. The new emphasis upon the social aspects of education is linked with the idea that in a democratic society, civic and social education is essential for all citizens.

Despite the acceptance by many teachers of the broader concept of education, conflicting opinions exist in regard to both the responsibilities of the school and the best methods to achieve them. Group study and discussion of these matters can well be incorporated in an in-service education program for teachers. The following statement² prepared by a council of elementary teachers is suggestive of the attitudes of teachers which should prevail when conflicting ideas arise in group endeavors.

Because of conflicting viewpoints which exist in the field of elementary education there is need for schoolworkers to learn to think together. It is not necessary that they think alike, nor the same things; differences are wholesome and necessary to progress. Uniformity in school programs is deadly but unity of basic ideas is most desirable. We school people need to exchange ideas, to speak freely about the things we believe without fear; to learn how to differ agreeably, objectively, impersonally; to be tolerant of the ideas of others even when we disagree; to see all sides of any question we raise; to accept or reject ideas or proposals on the basis of the best and most critical thinking we can do; to develop an *experimental* attitude toward our work. We are too often prone to hold opinions without a critical basis in thinking; our own experiences and opinions are valuable but they must be constantly validated by study and discussion. Many changes in ways of working with children are coming about as the result of research. We need to keep abreast of change. We must study constantly these trends if we are to keep our thinking and our classroom practice up to date and vital.

Growth Imperative for All Living Organisms.—Stagnation is fatal to all forms of living organisms. When growth ceases deterioration begins. The teacher who fails to continue her own intellectual growth soon finds it difficult to stimulate such growth in her students. Only by an extension of her own intellectual life can the teacher augment that of others.

Life soon loses its zest for the person who makes no effort to advance his own knowledge or deepen his understandings. The best insurance for mental health is the stimulus of a strong impelling interest in personal and professional improvement. In the field of

² Association for Supervision and Curriculum Development, National Education Association. *Group Processes in Education*, Washington, 1945, p. 104.

intellectual achievement, the teacher should be a worthy representative of the culture she serves. The teacher's interests should be constantly deepening and widening. Her enthusiasm for life should be constantly revitalized by new ideas.

Need for Growth Existent in Teaching Situation.—Every social situation is novel. No two situations are composed of identical factors in the same combination or relationship. Each evolving situation makes a demand upon the individual for adjustment and orientation. The teacher carries on her work in a rapid succession of novel situations. The challenge presented by each newly developing situation requires great adaptive ability. No fixed teaching procedures or formulae will suffice. This fact makes teaching difficult but also fascinating. The alert teacher is constantly stimulated by new factors or different combinations of factors in the teaching situation. Pupils react differently in each new situation. Their behavior patterns are in process of continual modification. Teaching cannot be completely routinized. There is need for experimentation in more effective procedures, in the use of new instructional materials, and of more accurate methods of evaluation of the outcomes of instruction.

New Concepts of Child Nature and Growth.—Each child is now recognized as a unique personality, actively conditioned by his environment. He is the product of his experiences in his community, home, and school. He has been required to accept without question in the short period of his life all the taboos that civilized man has acquired through centuries of slow progress. His emancipation from complete adult domination is being consummated. His needs embrace every aspect of human existence—social, emotional, intellectual, and physical. Development in these various areas may be very uneven and slow. His efforts to maintain his personality intact are being assaulted by powerful forces from every direction. The fundamental drives to human action—desire for recognition, security, new adventure—are unrestrained. He is highly sensitive to the reactions of other children of his own age group. Frustration and emotional blocks to learning result from unsympathetic, unintelligent efforts of teachers and parents to require him to conform to adult standards of thought and behavior. Growth cannot be forced.

Clinics on child development are designed to give teachers insight into child growth. In her daily contacts in the classroom, the teacher has an excellent opportunity to observe the reactions of children to their social environment. She also is in a position to analyze the sources of children's confusions and fears. A study of the various

aspects of human behavior in an in-service education program should assist the teacher in providing the basis for interpreting her classroom observations

2. TYPES OF IN-SERVICE EDUCATION

Teacher growth in service can be promoted by (1) participation in cooperative endeavors with other teachers and (2) individual teacher effort. An adequate in-service education program usually includes both types of activities. While many aspects of personal and professional growth can best be provided for by sharing in group undertakings, there are many phases of the program in which it is advantageous to employ procedures which are individualistic in nature. The relative value of the two elements of the program depends upon the needs of individual teachers. Those teachers who have limited experience in working with other persons may derive greater benefit from group enterprises, whereas other teachers may need the opportunity to work at some task requiring individual thought and effort. In most instances, the individual teacher who is desirous of continuing her growth in service will find it advantageous to include both cooperative and individual projects in her program.

The elementary school teacher is afforded numerous opportunities for both types of learning experiences. Among the most effective activities are:

Characteristically Cooperative Enterprises	Characteristically Individual Endeavors
Faculty and staff meetings	Authorship
Teacher councils	College work
Study groups	Reading
Workshops	Research and experimentation
Demonstration centers	Travel
Study clinics	Interschool and intraschool visitation and observation
Orientation of new teachers	Educational addresses
Group excursions in community	Membership and participation in or- ganizations
Planned visitation and observation	Self evaluation
Teacher committee work	

Essentials of Cooperative In-Service Education.—A cooperative program of in-service education of teachers serves the purpose of vitalizing the work of the school, as well as promoting teacher growth. The two functions are interdependent. In this chapter, however, the teacher-education aspect of the program will be empha-

sized. The effectiveness of cooperative programs of in-service education is closely related to their democratic elements.

As a member of a group of teachers engaged in study of a problem vital to the school, the individual teacher is presented with an excellent opportunity for personal and professional growth. As a participating member of such a group, the teacher has the responsibility for assisting in the promotion and maintenance of conditions conducive to cooperative democratic endeavor.

In a cooperative endeavor each member of the group has the responsibility of identifying and suggesting significant problems for study by the group. These problems should have their origins in the group situation and be of such a nature as can be solved by the group. The only compulsion upon members to participate is provided by the challenge of the problem. In the work and deliberations of the group the individual teacher should exercise her influence in maintaining conditions which foster free and impartial inquiry. The individual teacher is expected to participate with the group in taking appropriate action to implement the decisions of the group.

Teachers' Meetings.—The chief value of the general teachers' meeting to the individual teacher is that of providing a general orientation to the broad aspects of the educational program of the school system. This purpose is achieved by familiarizing the teacher with the general objectives and policies of the system of which she is a part. Problems which are specific in nature can best be solved in meetings of smaller groups, such as the faculty of a particular school, or in conferences with administrative and supervisory officials.

In many schools teachers are expected to serve on committees which have the responsibility for planning and conducting teachers' meetings.

The following list of topics illustrates the type of problems upon which teachers have made a cooperative attack in their faculty meetings:

- Dynamics of child groups
- Pupil-teacher planning
- Individual differences
- General scope of the curriculum
- Evaluation of pupil achievement
- Guidance responsibilities of teachers

Teacher Councils.—Central organizations comprised of representatives of classroom teachers, administrative and supervisory staffs, and special-service personnel have been formed in several school sys-

tems. Their general purpose is to receive suggestions and opinions of other teachers in regard to different school problems, and convey constructive proposals to the superintendent and board of education. In some instances problems are referred to the council by the superintendent for study and recommendation. The council may also serve as a coordinating and unifying agency by reviewing the reports of various committees of teachers.

From the viewpoint of in-service education, obviously the greatest values accrue to the teachers who have the opportunity to serve as members of the council. However, the opportunity provided by this type of organization for all teachers in a school system to give expression to their ideas on school policies, as well as to be the beneficiaries of any constructive action growing out of the council's recommendations, serves to create a favorable environment for teacher growth.

Study Groups.—There has been an increasing tendency for teachers within a school to form informal groups for the study of a single problem or a series of problems which appear to be pressing for solution in their school. The composition of the study group depends upon the outcomes sought. Teachers with similar professional duties may consider instructional problems within a particular area of the curriculum. For example, the teachers of the third grade pupils may wish to study curricular materials and teaching procedures suitable for use in that grade. A problem common to persons in different types of schools may be the basis for membership and participation in a study group. For example, representatives of junior high schools, senior high schools, and elementary schools may come together to study the problem of articulation of the schools they represent.

Members of the school personnel charged with the responsibility of achieving a common objective in an educational program may form a study group to consider their common task. For example, physical education teachers, school health service representatives, science teachers, and school cafeteria managers may study means of coordinating and strengthening the student health program.

Study groups may be formed by teachers with similar viewpoints on a particular issue for the purpose of devising methods of arousing the interest of other teachers or persons in the matter, or a study group may seek to promote action along the lines of their interests.

A modified form of study group is the teachers' book club. Eight or twelve teachers each purchase a professional or nonprofessional book. The books are distributed to the members by a rotation system, each

member retaining a book for a period of one month and then passing it along to another member. The members of the book club may hold meetings periodically for the purpose of discussing the various books.

Aside from its possible value in improving school practice in a particular area, the study group may serve to demonstrate to teachers the democratic way of accomplishing a task. The stimulus of the group, the informality of the organization, and the flexibility of the procedures are conducive to understanding, initiative, and leadership on the part of the individual teacher. Participation in group activities on this basis also tends to promote feelings of comradeship among teachers, as well as a sense of belonging on the part of the individual teacher.

Workshops.—No recent development in the in-service education of teachers has attracted more widespread interest than the workshop. The distinctive aspect of the workshop is the opportunity afforded individual teachers and groups of teachers to study the problems which most directly concern them under the most favorable and democratic conditions without regard to conventional class organization and procedures

Workshops have been conducted under the auspices of various organizations and agencies, as follows:

1. Sponsored by colleges, usually in the summer, for individual teachers from different schools, or for groups of teachers from one school (In some instances, colleges have conducted extension classes in the form of workshops during the regular school year.)
2. Conducted by public school systems for teachers in the system (These workshops may include teachers with a special problem or interest, or they may include all the teachers in the system. These may be conducted in the summer or during the school term.)
3. Directed under the joint sponsorship of a college and a public school system
4. Co-sponsorship of a school system and a national organization interested in the education of teachers

Organization of Workshops.—A staff, consisting of a director and a group of consultants representing different fields of interest, is usually selected to direct the general activities of the workshop. The actual plans are made by a committee of teachers, staff members, and representatives of the sponsoring agencies. These plans are based upon information obtained in advance from the prospective members

of the workshop. The members organize themselves into different groups on the basis of their interests or problems. Each group elects a representative to a planning committee, whose function is to plan the program from week to week.

Procedure.—The activities of a workshop group for a typical day are as follows :

1. A general morning meeting of all members of the workshop is held. Topics of general interest are discussed by the director, consultant, visiting expert, and members of the workshop. These programs are designed to unify the workshop activities, serve as a general clearinghouse for information, and provide continuous motivation for the workshop activities.
2. At the noon hour participants have lunch together to enlarge acquaintance and to develop the spirit of good fellowship.
3. The afternoon is devoted to individual and small group activities. Conferences with consultants are held. Suitable library materials and audio-visual aids are utilized by individuals and groups. The different groups meet two or three times each week to discuss their specific problems. Provision is made in the schedule for members to work on individual problems and exchange ideas with each other. Flexibility in the organization is provided to permit individual members to withdraw from one group when his purposes have been served and become a member of another group.
4. The evening meetings are largely devoted to social activities and recreation.

Evaluations of their experiences by members provide fairly convincing evidence of the importance of workshops in an in-service education program for teachers. Workshop participation, however, represents only one significant type of educative experience. It does not contain all the desirable elements in a program of teacher education. Perhaps every teacher should have some workshop experience. Equally true is the fact that every teacher needs to engage in in-service learning exercises which are not stimulated and directed by group activity.

In respect to the relative value of local school workshops in comparison with college campus workshops, it should be observed that to relate the activities of the local workshop to the actual problems of a particular school is easier to do than in the campus workshop. On the other hand, it should be recognized that many local schools do not possess adequate financial resources or library facilities to conduct their own workshops. In the college-directed workshop, the library and other facilities are usually more satisfactory. The exchange of

ideas among teachers from different schools in a campus workshop may serve a useful purpose in broadening viewpoints in regard to many school problems.

Demonstration Centers.—In some city and county school systems, a school which possesses the necessary facilities and competent teachers is designated as a demonstration center. Teachers from other schools are given the opportunity to observe the use of new curricular materials and techniques of teaching. Recently many school systems have established centers to demonstrate the proper use of audio-visual aids. Socialized procedures such as the project method and unit methods have served as the basis of many teaching demonstrations.

The value of demonstration to the individual teacher is dependent not only upon the quality of the teaching but also upon the ability of the observer to analyze, interpret, and adapt the procedures observed to her own teaching. To assist the observing teacher in this respect, predemonstration conferences are usually held between the demonstrating teacher and the observers, in which the objectives of the lesson are discussed. The demonstration is also followed by a discussion period in which the teaching procedures and outcomes are evaluated.

Study Clinics.—Representative teachers from many local school systems attend study clinics conducted at some of the larger universities for the purpose of making an intensive study of some significant problem under the guidance of experts. The list of topics ranges from improved methods of pupil evaluation to methods of understanding children. Important values can be achieved by this type of professional education, especially if the teachers attending the clinic return to their respective schools and share their learning with other members of their faculties.

Orientation of New Teachers.—A continuous educational program is essential to the progress of a school. This continuity is often jeopardized by the large turnover in teacher personnel. For example, many curriculum revision programs have failed of fruition because the new teachers did not wholeheartedly accept responsibility for carrying it forward. This difficulty can be alleviated somewhat by the early orientation of new staff members to the ideals and objectives of the program.

New teachers may also encounter difficulty in making the necessary adjustments to the community. The older members of a school faculty can be of assistance to the new teacher in becoming oriented to the new school and community situation. A growing number of school facul-

ties cooperate in extending various forms of hospitality to new members. Such plans have attained excellent results in maintaining cordial teacher-teacher relationships, thus providing a sound basis for constructive, cooperative educational endeavor.

Group Excursions in the Community.—A requisite for building a sound educational program is a thorough understanding of the community of which the school is a part. The attitudes and behavior of youth can be interpreted only in terms of their community background. A knowledge of community life is likewise essential to the proper utilization of community resources as curricular material.

In an endeavor to understand the economic and social conditions of their school communities teachers have organized community-study groups. As a part of their activities in this respect, teachers make planned excursions to various places in the community for the purpose of obtaining firsthand information in regard to local housing conditions, industries, welfare, and public service agencies. In larger schools, communities interested in various phases of community life may visit different places and make reports to the entire faculty. Teachers who participate in activities of this nature are better able to assist pupils to bridge the gap between school activities and life outside the school. More effectual application also can be made of curricular materials to the problems and needs of children living in a particular community.

Planned Visitation and Observation.—Provision is made in schools for teachers to observe the work of other teachers in the same or other school systems. To insure the maximum benefits to the visiting teacher, it is necessary for the teacher and supervisor to plan the visits very carefully.

The possibilities of directed visiting in improving instruction are revealed by a consideration of their purposes as stated by Briggs.³ He says directed visiting enables a teacher

- 1 To see a concrete exemplification of some theory that has previously been to him merely abstract
2. To see some special practice or skill demonstrated well
3. To observe, for comparison, practices that are similar to or diverse from his own
4. To learn the effective use of equipment, direction of auditorium programs, rehearsing and producing of plays, preparation of exhibits, direction of the school publications, and the like
5. To acquire higher standards

³ Thomas H. Briggs, *Improving Instruction*, p. 489.

6. To become acquainted with pupils soon to be promoted to him in the course that they are following
7. To learn of the success and failures in advanced courses of pupils whom he has taught and of the requirements that they have to meet
8. To know the work of the other teachers in the same school as a contribution to the unity of the corps

Curriculum Committees.—One of the important objectives of a curriculum-revision program is the in-service education of teachers. The organization of a faculty for purposes of curriculum construction usually includes provision for various committees of teachers. In these committees the main work of revision is done. The policies which govern the work of curriculum committees are summarized in the following statement from the coordinator of instruction of the Oakland, California, schools: ⁴

Teacher education rather than curriculum materials is the concern of our instructional program. Principals, teachers, and supervisors work together cooperatively, each making the contribution of which he is most capable. Committees serve for long or short periods as the need exists. The entire program is flexible and adaptable to current demands and current conditions.

The study of the multiple problems involved in curriculum revision presents excellent opportunities for teacher growth. One of the necessary and highly important phases of a curriculum development program is that of preparing courses of study for the guidance of teachers in using the suggested curricular materials. An examination of a typical course of study will reveal the great variety of problems which a curriculum committee encounters. The problems range from that of formulating a statement of the guiding philosophy of a course to the task of making a list of suggestions for evaluating pupil achievement. Another significant outcome of active participation by the teacher in curriculum committee work is that it increases her efficiency in the use of curricular materials to promote more effective pupil learning.

Activities of Other Teacher Committees.—In addition to continuing committees which study the persistent problems of the school program, many short-term committees function in connection with special problems such as improvement of guidance, library service, and teacher welfare in times of increasing cost of living. These com-

⁴ Quoted from *Leadership at Work, Fifteenth Yearbook* of the Department of Supervisors and Directors of Instruction, National Education Association, p. 100.

mittees are usually terminated after their study has been completed and their report with recommendations is made to the faculty.

Numerous other school problems in addition to those described in the preceding sections of this chapter have been studied by teacher committees. Through their committees, teachers in many school systems participate in the selection of new personnel. By means of interviews, questionnaires, and visits to other schools, the committee obtains information in regard to the qualifications and viewpoints of applicants for administrative and teaching positions in their school. School board relations committees represent teachers at some of the meetings of the board in discussions of various instructional problems. Problems of teacher welfare, such as tenure and retirement, have been the subject of teacher group study. In fact many of the teacher tenure and retirement plans now in operation were initiated and sponsored by committees of teachers. Instructional practices likewise have come within the scope of special committee study.

3. MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS

The teacher who seeks to keep up in her profession and improve it should be an active member of several professional organizations. These fall into three general groups:

1. State and national general education associations
2. Organizations centering around special fields of teaching or administration
3. Organizations primarily for the improvement of working conditions, salaries, tenure, etc.

National Association.—The National Education Association, founded as the National Teachers' Association in 1857, now enrolls more than 440,000, or 48 per cent of the teachers in the United States. It publishes the *Journal of the National Education Association*, which contains short articles on teacher growth and welfare, curriculum, and methods. In the N. E. A. there are twenty-eight departments primarily concerned with the problems of classroom teaching. In addition to these departments, to which reference is made elsewhere in this chapter, the N. E. A. has six deliberative groups known as councils or commissions.

The N. E. A. and its various departments and divisions issue year-books and bulletins containing much useful information. While the activities of the N. E. A. are designed primarily to promote teacher growth in service, it does have a legislative program looking to better support of the schools and has been somewhat active in that field. It

has also functioned occasionally (and somewhat feebly) in matters of academic freedom and teacher tenure. The recent adoption of the Victory Action Program reveals a more aggressive and forward-looking attitude on the part of the N. E. A. The goals which the organization hopes to achieve by or before 1951 ⁵ are as follows:

1. Active, democratic local education associations in every community affiliated with the state and national associations
2. A strong and effective state education association in every state
3. A larger and more aggressive national education association
4. Unified dues—local, state, and national—collected by the local
5. A membership enrollment of at least 90 per cent in local, state, and national professional organizations
6. Unified committees—the chairmen of local and state committees serving as advisory members of the corresponding national committees
7. A professionally prepared and competent teacher in every classroom
8. A professionally prepared and competent principal at the head of every school
9. A professionally prepared and competent administrator at the head of each school system
10. A strong, adequately staffed state department of education in each state
11. A professional salary for all members of the profession, adjusted to the increased cost of living
12. Professional security for teachers and administrators guaranteed by effective tenure legislation
13. Retirement income for old age and disability
14. Cumulative sabbatical and sick leave
15. Reasonable class size and equitable distribution of the teaching load
16. Informed lay support of public education at local, state, and national levels
17. Units of school administration large enough to provide for efficient operation, with special attention to the needs of rural areas
18. Adequate educational opportunity for every child irrespective of race, creed, color, or residence
19. The equalization and expansion of educational opportunity, including needed state and national financing
20. A safe, healthful, and wholesome community environment for every child
21. An effective United Nations Educational, Scientific and Cultural Organization

The National Catholic Education Association is a strong organization for teachers in Catholic schools. A great many Catholic teachers also belong to non-Catholic associations.

Another general national education association, the American

⁵ *Victory Action Program*, adopted by National Education Association, Buffalo, New York, July 5, 1946.

Education Fellowship, formerly called the Progressive Education Association, was founded in 1924. This organization stresses a modern philosophy of education, emphasizes the child and his growth, and education for fellowship and citizenship from the community to the international level. It has influenced educational thought and practice in recent years, despite the fact that it has never enrolled more than a few thousand members. The official journal of the organization is entitled *Progressive Education*.

State Associations.—Each state and territory has its own state education or teachers' association. Like the national organization, each of the state organizations issues a journal devoted largely to professional articles, news, and state problems. Most of these journals are of rather mediocre quality as to professional content, but contain many articles of interest to teachers of the particular state. The state associations have been more active than the national association in obtaining favorable legislation and school funds.

Following are typical objectives of state education associations:

1. To build an informed professional and civic intelligence among its members
2. To set every teacher at work on the problems of the profession and the community
3. To improve teaching, the curriculum, and school organization
4. To improve the selection and preparation of teachers
5. To foster a unified profession—strong on local, state, and national levels
6. To support important federal legislation
7. To improve adult and higher education
8. To build public support for our common schools
9. To foster world understanding and cooperation
10. To improve community life
11. To enhance teacher welfare, including:
 - a. Statewide minimum salaries, with provision for progressively higher standards, and special recognition for added study or travel
 - b. A modern salary schedule in each local community to meet its special needs
 - c. Provision for teacher tenure and security
 - d. Provision for sick leave and sabbatical leave on a cumulative basis
 - e. Adequate provision for retirement on account of disability or age ⁶

Teachers' Unions.—In 1902, the Chicago Teachers Federation affiliated with the Chicago Federation of Labor. In 1916, the American Federation of Teachers was formed as an affiliate of the American Federation of Labor. Because of the opposition of the National

⁶ Joy E. Morgan, "Building an Action Program for the State Association," *Journal of the National Education Association*, XXXV, 165.

Education Association and of superintendents and boards of education who frequently intimidated teachers in their respective school districts, the membership in the American Federation of Teachers did not number more than 10,000 to 12,000 until the depression came in the 1930's. Since then, it has grown steadily until by 1949 it had spread into every section of the country and had an enrollment of more than 50,000 members. With few exceptions, the Federation is no longer opposed by school administrators. The official journal of the organization, *The American Teacher*, contains many articles of vital educational and social significance.

The Federation has two main objectives. It purposes to consolidate the teachers of the country into a strong group which would be able to protect its own interests. It aims to raise the standard of the teaching class by a direct attack on the conditions which, according to the belief of the Federation, prevent teaching from enjoying the status of a profession. These conditions are lack of academic freedom and of civil liberty and the absence of the opportunity for self-determination of policies and for democratic control.⁷

In Article II of their constitution, the objectives of the Federation of Teachers are stated as follows :

1. To bring associations of teachers into relations of mutual assistance and cooperation
2. To obtain for them all the rights to which they are entitled
3. To raise the standard of the teaching profession by securing the conditions essential to the best professional service
4. To promote such a democratization of the schools as will enable them better to equip their pupils to take their places in the industrial, social, and political life of the community
5. To promote the welfare of the childhood of the nation by providing progressively better educational opportunity for all ⁸

The rapid growth in recent years of the American Federation of Teachers may be attributed largely to the academic and timid policy of the National Education Association. The relative ineffectiveness of the N. E. A. in obtaining greater financial support for schools and in preserving academic freedom has caused many teachers to seek membership in a more aggressive organization. The series of friendly meetings with the National Association of Manufacturers (a traditional and powerful force for lower taxes and opponent of measures

⁷ A. W. Robinson, *A Critical Evaluation of the American Federation of Teachers*. Chicago: American Federation of Teachers, p. 58.

⁸ Constitution of the American Federation of Teachers, as adopted at the Seventeenth Convention, and corrected as of September 1, 1945.

and movements for social progress) which were sponsored by the leaders of the N. E. A. did much to weaken the confidence of many teachers in their national organization. State organizations have been instrumental in obtaining better financial support for the schools.

The teachers' unions have been very effective in recent years in bargaining with boards of education for higher salaries and better working conditions for teachers. Unless the national and state associations develop a markedly more aggressive policy and practice in dealing with such problems as salaries, academic freedom, teaching load, and permanent tenure, it appears inevitable that some sort of teachers' union will eventually enroll a majority of the teachers in the country and become the leader of teachers and the aggressive advocate of their cause, in spite of the objection to having teachers or the schools, supposedly impartial leaders of youth, hold membership in a labor union.

In England there has been for some time a powerful teachers' union enrolling more than a majority of the teachers as members. This union is unaffiliated with any labor union

Should the Teacher Belong?—Every teacher should become an active member of at least three or four of these organizations including the following :

1. The local teachers' association
2. The state education association
3. The National Education Association
4. At least one specialized organization, e.g., Department of Classroom Teachers
5. A teachers' union, if one is accessible

It is no longer to be considered undignified or unprofessional to belong to a teachers' union. In these days of organizations of employees and employers and of pressure groups, unorganized workers are at a serious disadvantage in commanding the respect of legislators or of other groups. One should not choose between the N. E. A., a state education association, and a teachers' union. The first should be supported for its activity at the national level and its publications, the union for its practical aggressive leadership in such matters as salaries, academic freedom, tenure, and other matters pertaining to teacher welfare, and the state education association for its leadership on a state-wide basis.

The total annual dues for five organizations of the kinds named above are at the present writing less than thirty dollars. These fees

include subscriptions to valuable journals and other publications likely to contribute to the improvement of the teacher and to her professional advancement. Since most of these organizations are constantly fighting the battles for schools, for increasing teachers' salaries, and for improving working conditions for teaching, no teacher can conscientiously accept their benefits and refuse to contribute to their support. To do that is hardly good citizenship; moreover it is a demonstration of willingness to be an object of professional charity.

4. GENERAL AND PROFESSIONAL READING

General Reading.—As a part of her professional as well as her general cultural growth, the teacher must make definite provision for a systematic reading program. In preparing young people for the world ahead, the teacher must know that world and what goes on in it. Immediately upon beginning her teaching career she must expand and maintain her knowledge and understanding of the world in which her students will find their life and problems. She must continue to learn about public affairs—local, state, national, and international—otherwise she will soon become merely a “schoolmarm.”

The time has arrived when the well-read teacher, informed on problems and affairs in contemporary American life and culture, is the rule. The time is apparently not far in the future when, except in rural and village schools and among superannuated teachers, the exception will be the traditional lesson-learning “schoolmarm,” the ivory-tower classroom creature who knows not the world in which she is preparing young people to live. As one speaker before many state education associations has frequently stated: “There is no place in the modern school for the young thing just out of college with her head full of fraternity frivolities and notebooks full of inert book and lecture data; or any other type of schoolmarm, male or female, who takes refuge, ostrich-like, in the classroom with the children from the problems of a world in transition and thus seeks apparent freedom from responsibility for understanding the world of today, while others less well educated meet the problems of the times.” Even the public has begun to lose respect for the teacher and the school that do not prepare young people to understand the new world—the “air age,” the “atomic age,” the new era of interdependence nationally and internationally, economically, politically, and culturally.

If the teacher has not already done so, she should learn to assimilate, discount, and interpret what she reads on current problems and affairs. In the authors' opinion, there are very few periodicals and practically no newspapers or radio commentators that can be relied upon to treat current issues impartially. Nevertheless the teacher through continual reading of biased publications grows steadily in her knowledge and understanding of such matters from reading on both sides. To read only journals with an antilabor and pro-big-business bias or those with an ultraliberal, prolabor bias will result in at least partial misunderstanding of current, controversial issues.

Teachers are genuinely interested in world peace. World peace will come only as the result of mutual understanding among peoples of all quarters of the globe. The present generation of adults is relatively ignorant and provincial. They are unsuited for living in the age of atom bombs and international interdependence. Our hope lies in a new generation better educated for the new world. Likewise, peace and prosperity at home seem out of the reach of our present adult generation, whose education has been one for vocation and academic ivory-tower culture alone. Problems in this area also await a generation appropriately trained. Because of these conditions, teachers hold the key to world peace and to the continuation of our march toward democracy and a high standard of living for all.

Many teachers take each year a current affairs test such as that published by the Cooperative Test Service of New York City and attempt the following year to improve their scores. It is encouraging and indicative of the trends of the times that the National Teachers' Examination—one of the means of selecting teachers in many cities—includes a test on contemporary affairs and culture. A program of general reading should do more than keep the teacher informed in regard to developments in the world. A well-balanced program should make provision for reading of recreational books which entertain; new and timely books which the world outside the school is reading, books which will lead to good conversation at the dinner table, books which take one far afield to China, Mexico, or Russia, books read for their excellence of style, and books and magazines read "just for fun."

The teacher who wishes to enrich her experiences by reading should follow a program such as the following:

1. Read regularly at least one good daily newspaper that has accurate national and international news coverage, even if it arrives a day late from a city some distance away

2. Read a local newspaper to keep informed in regard to community affairs.
3. Read or scan at least two weekly periodicals:
 - a. A journal with a bias in favor of the conservative view, e.g., *Time* or *Newsweek*.
 - b. A journal with a bias in favor of progressive and liberal ideas, e.g., *New Republic* or *The Nation*.
4. Read at least one good general monthly periodical—*Harpers Magazine* or *Atlantic Monthly*.
5. Read at least one digest or short-article periodical, e.g., *Coronet* or *Magazine Digest*.
6. Read a few good books—one a month if possible—including annually at least:
 - a. Two classic books such as :
The Bible
Plato, *The Republic*
Emerson, *Essays*
Bacon, *Essays*
Shakespeare, *Plays*
Tolstoy, *War and Peace*
Rousseau, *Emile*
Hugo, *Les Misérables*
Ibsen, *Plays*
Shaw, *Plays*
Franklin, *Autobiography*
Twain, *Huckleberry Finn*
Whitman, *Leaves of Grass*
Darwin, *The Origin of Species*
Dreiser, *An American Tragedy*
Sandburg, *Abraham Lincoln; The Prairie Years*
 - b. Three or four books on current problems such as :
Peace or Pestilence, by Theodor Roseburg
Inside U. S. A., by John Gunther
We Are All In It, by Eric Johnston
Target: You, by Leland Stowe
Leave It To The People, by Quentin Reynolds
The Road We Are Traveling, by Stuart Chase
New Worlds Emerging, by Parker Hansen
Liberalism and the Challenge of Fascism,
by J. Salwyn Schapiro
 - c. Two or three novels such as :
The Big Fisherman, by Lloyd C. Douglas
To Be A Pilgrim, by Joyce Cary
Prairie Avenue, by Arthur Meeker

Kinfolk, by Pearl Buck
Point of No Return, by J. P. Marquand
Nineteen Eighty-Four, by George Orwell
The Grapes of Wrath, by John Steinbeck
Barriers Between, by Marc Brandel

- d. One book on a historical, scientific, or other cultural subject such as :

The Age of Jackson, by Arthur M. Schlesinger, Jr.
Nathaniel Hawthorne, by Mark Van Doren
Roosevelt and Hopkins, by Robert Sherwood
Crusade in Europe, by Dwight Eisenhower
Peace of Soul, by Fulton J. Sheen
You Cannot Escape History, by John T. Whittaker
Our Plundered Planet, by Fairfield Osborne

In the past few years more interesting and reliable small books on current subjects have been published in series than ever before. Many of these publications can be purchased at nominal prices. The names of some of the best-known series are as follows: Pocket Books, the Signet and the Mentor Books, the Penguin Books, all with offices in New York City; the books of the National Home Library, Washington, and, in addition, there are several series of excellent, inexpensive publications of pamphlet size which are widely read by educated men and women. These deal with current public questions, domestic and foreign. Some of these series are: *Headline Books*, Foreign Policy Association, New York; *Public Affairs Pamphlets*, on a wide variety of timely topics, Public Affairs Committee, Inc., New York; and *Town Hall Bulletins*, containing panel discussions of important, timely, current questions, The Town Hall, Inc., New York.

Professional Reading.—In planning a well-balanced program of reading the teacher should reserve some time for reading a few of the best current professional books and periodicals. No other single means of in-service education offers greater opportunities for the teacher to keep abreast of new developments and trends in the profession than those afforded by a carefully planned program of professional reading. Not only should the teacher keep informed in regard to developments in elementary school teaching but she should be familiar with the new and changing concepts, theories, and practices in education in general.

Professional reading presents the teacher with the opportunity to share in the experiences of other teachers who are seeking to make their teaching more effective. The challenge and the stimulation that

come from the reports of the endeavors of other teachers add zest to the efforts of the teacher who is desirous of improving her own teaching. Perhaps the greatest value which comes from reading a good professional book is that it enables a teacher to recapture waning enthusiasms and renew her faith in the power of education in human affairs.

Despite the inherent values in professional reading, there is considerable evidence to indicate that the reading materials of large numbers of teachers are very narrow both in scope and in variety. From the great mass of professional literature the teacher should carefully select materials for reading which best serve her needs. No definite prescription can be given that will meet the needs of all teachers. An adequate program of professional reading should include elements which provide information in regard to the following :

1. Significant developments and trends in public education
2. New concepts of learning and child development
3. Promising practices in curricular organization and teaching procedures
4. Newer practices and teaching materials in subjects taught

To assist teachers in selecting reading materials wisely, many educational groups and institutions periodically issue lists of selected books on education. Perhaps the best known of these is published each April in the Journal of the National Education Association, which lists the sixty best books on education published during the year. Many teachers read the summaries of articles published in the Education Digest and select those in which they are particularly interested to read in their entirety in the journal in which the articles were originally published. The Education Index contains a rather complete list of articles on education which are published in periodicals. Some of the magazines which feature articles of particular interest to the elementary school teacher are as follows :

Elementary School Journal	The American Teacher
Progressive Education	The Educational Screen
Childhood Education	Normal Instructor and Primary Plans

5. OTHER MEANS OF PROFESSIONAL GROWTH

Professional Writing.—No other type of activity carries greater recognition than professional writing. The number and quality of published articles and books are among the most important criteria

in determining teacher promotion in many schools. A consideration of the significance of professional writing reveals several good reasons why teachers engage in this type of activity.

The chief value of writing an article for publication accrues to the teacher who does the writing. The actual work of writing must be preceded by a careful study and analysis of the problem. The organization of the material requires the selection of the most relevant data and the rejection of those of minor importance. The necessity of writing the material in a manner to insure clarity, simplicity, and forcefulness of expression provides excellent training for a teacher in improving the quality of her classroom presentation.

Professional writing also enables the teacher to assist other teachers in the solution of some of their problems, thus extending her sphere of usefulness. A description or report of an effective classroom procedure may be instrumental in causing teachers in other schools to improve their own teaching. The classroom situation can be a learning laboratory for the teacher as well as for her pupils. The insights and understandings obtained as a result of firsthand experiences with the problems of pupils serve as a practical basis for significant educational writing.

Travel.—In Chapter 17 the suggestion was made that teachers should make visits to various places in the local community to obtain firsthand information in regard to living conditions. Valuable as these trips are, they should be supplemented by more extensive tours. Travel is an integral part of the teacher's preparation for teaching. If instructional materials are to be made meaningful to the pupil, they must first be meaningful to the teacher. The vividness and reality of verbal descriptions in books of places, persons, and events can be greatly enhanced by seeing them in their natural surroundings.

By granting salary increases comparable to those allowed for summer school attendance many school boards have recognized the importance of travel. Large numbers of teachers of modern foreign languages visit the countries where the languages are spoken. A knowledge of a people is indispensable to a genuine understanding of their language. In teaching the social studies information and inspiration may be obtained from tours of places of current economic and social significance as well as of centers of governmental activity and historical shrines. In teaching science there is much value in trips to different geographical regions to study at first hand the distinctive features of those areas. A vacation spent in one of the national parks should improve the teaching of teachers. Visits to great art galleries,

libraries, and museums can contribute to better teaching of many subjects. By travel and wide reading the teacher can enlarge her vision and discover means of making new applications of the subjects taught.

Many organizations sponsor guided tours for teachers to different parts of this and other countries. These tours have the advantages of convenience and economy. Too frequently, however, these guided trips are organized without sufficient recognition of the interests and needs of individual teachers. Perhaps it is advisable for the teacher to plan her own trip in terms of her particular purposes, interests, financial ability, and time available.

College Work.—The most convincing evidence that teachers as a group are desirous of improving their instruction is revealed by the fact that thousands of teachers take graduate college work after they begin their teaching careers. Large numbers of teachers attend summer schools conducted by colleges and universities. Many teachers, also, take advantage of the opportunities presented by correspondence and other extension courses to continue their college work in addition to their regular teaching duties. A considerable number of teachers spend their sabbatical leaves in graduate study.

Many school boards recognize the values of graduate study in improving the effectiveness of teaching by increases in salaries of teachers who earn additional credit either in summer school or during the school term. A few school boards require all teachers in their schools to attend summer sessions.

The chances are very great that college courses taken after a person has begun her teaching career will have more meaning and significance to her than similar courses taken before she has had any teaching experience.

The content of the course can be related more directly to problems encountered in actual classroom situations. Courses can frequently be chosen in terms of the specific problems of the individual teachers. Some of the most important values of summer school attendance are derived from informal discussions of teaching with teachers from other schools.

The significance of postgraduate work in improving teaching efficiency is dependent upon several factors. Since the quality of instruction varies greatly in different summer schools, the teacher should exercise intelligent discrimination in the selection of the college in which she is to do her study. The institution, instructors, and courses can be chosen in the light of the teacher's individual teaching problems

and future professional plans. If good judgment is exercised in respect to these matters, the background of teaching experience and the earnestness which characterize the study of teachers combine to make summer school study an invaluable experience.

In the event that college courses taken by extension during the school term are closely related to problems being encountered by the teacher in her actual teaching, they can contribute greatly to teacher improvement in service. Properly correlated, the classroom situation can serve as a laboratory for the study of topics suggested in the course. Unless the two are supplementary, it is usually feasible to postpone the course until summer school.

QUESTIONS, PROBLEMS, AND EXERCISES

1. Assume that you are a teacher in an elementary school in a town of 10,000 population. Outline in some detail a plan for your own professional growth
2. Under what conditions are school boards justified in requiring all teachers to attend summer school once every three years?
3. What are some of the difficulties involved in a truly democratic co-operative attack by teachers on a problem existing in their school?
4. Prepare a time budget which would enable you to devote a part of each week to general and professional reading.
5. Discuss the statement: "Teacher training institutions should fully prepare teachers in order that in-service growth will not be necessary."
6. Assume that you are chairman of a faculty committee appointed to study and report the possibilities of holding a summer workshop for teachers. Outline your procedure.
7. Make an inventory of the teacher committees in your school and list the work of each.
8. List some books in addition to those mentioned in this chapter which you would recommend for teachers to read.

Chapter 24

THE TEACHER AS A PERSON

1. ATTRIBUTES OF EFFECTIVE TEACHERS

Numerous lists of qualities which characterize good teachers have been formulated by research workers and supervisors. There are certain traits which appear in all these lists. It should be kept in mind that qualities are included as separate items for purposes of analysis and study. In reality an effective teacher can be described only by configurations of many attributes. Many of the single qualities are mutually interactive in their impact upon the child. For example, the question as to whether the personality of the teacher has greater significance than her technical skill is pointless, since these characteristics supplement and reinforce each other. It is difficult to conceive of a teacher with an effective teaching personality who is deficient in teaching skills.

In a recent study of the qualities and qualifications of excellent teachers, school administrators and supervisors were asked to give reasons why they thought some teachers were outstanding.¹ Without exception, the officials gave a *combination* of qualities as the reason for excellence. The majority of them agreed that an excellent teacher "is a person (1) who has those personal qualities of agreeableness, consideration for others, sincerity, and the like, which, all will agree, make one a desirable associate, (2) who also is professionally interested and competent, (3) who has, among other qualities, scholarship and culture, and (4) who, in addition, respects children and is respected by children and establishes wholesome pupil-teacher relationships."

A great many investigations have been made in an attempt to discover the major individual factors which are associated with success in teaching. Among the factors which have been studied are the following:

- Intelligence test score
- Marks made in college

¹ *Report of the Investigation of Educational Qualifications of Teachers in South Carolina*, Columbia: University of South Carolina, p. 30.

Age and sex
Amount of professional training
Years of experience
Amount of training in the field taught
Marks made in professional courses
Marks made in courses in field taught

In all these investigations some criterion of teaching success was employed. In most instances the measure of success was determined by the rating of supervisors. From these studies one is forced to conclude that none of the factors investigated seems to be closely associated with teaching success as measured by ratings of supervisors, although there is a positive correlation. It appears that, given a reasonable minimum of intelligence and appropriate training, it cannot be shown statistically that there is very great relationship between teaching success and measures of any of the traits thought to contribute to teaching success. Of course it is more than merely possible that the ratings of supervisors are not reliable and valid measures of teaching success. In fact, many students of the problem have arrived at the conclusion that the coefficients of correlation, which are usually between .15 and .30, would be materially higher between the respective factors and *reliable* valid measures of teaching success.

Personal Traits of Successful Teachers.—Several studies have been made of the personal traits of successful teachers and of the relative desirability of various traits for success in teaching. The traits ranking highest in these studies are the following :

Magnetism: approachability, cheerfulness, optimism, sense of humor, sociability, pleasing voice
Cooperation and helpfulness
Leadership, initiative, self-confidence
Self-control: calmness, dignity, poise, reserve
Breadth of interests
Good disposition: appreciativeness, courtesy, tact, sympathy, kindness, consideration

The next highest group are the following :

Enthusiasm: alertness, animation, inspiration
Attractiveness: personal appearance
Adaptability
Good judgment: discretion, foresight, intelligence
Honesty and impartiality
Ability to explain clearly

The third group includes :

Scholarship and knowledge of subject

Health

Forcefulness : courage, decisiveness, firmness, purposefulness

Promptness : dispatch, punctuality

Almost invariably, if asked what qualities are most essential to teaching success, school administrators and supervisors place at the top of the list what they refer to as "teaching personality." In general, personality seems to include such things as animation, personal appearance, congenial manner, effective speech, emotional stability, apparent interest in students, maturity of thought and action, sense of humor, optimism, temperament, poise, and sociability. In analyzing teacher personality, it is necessary to consider the total impact of the total pattern of these qualities upon the pupil. The individual qualities which make for excellence are not identical in all effective teachers. It would be as undesirable as it would be futile to attempt to fit all teachers into a common mold. Individuality and uniqueness of teacher personality is a priceless ingredient of a teaching staff. Envisage the boredom of a pupil who sits in a classroom hour after hour with a teacher of drab, humorless personality. A distinctive set of personal qualities, geniality, good sense of humor, sparkling facial expressions, may enable a teacher to make a noteworthy contribution to the mental and social development of pupils. Moreover, personal characteristics requisite for effective teaching vary in kind and degree at different grade levels and in different types of schools and communities.

Pupils' Opinions of Characteristics of Effective Teachers.—In several investigations, students have been requested to indicate the characteristics of the teachers they liked best. Bryan ² has given an excellent list of reasons why students' reactions should be considered in the evaluation of teachers.

In a recent study,³ 1667 eighth grade students were requested to give reasons why they thought the teachers whom they named were the most excellent. Responses mentioned most often include the following :

She was pleasant.

She was friendly.

² Roy C Bryan, "Why Student Reactions to Teachers Should Be Evaluated," *Educational Administration and Supervision*, XXVII, 560-603

³ J McT Daniel, *Excellent Teachers: Their Qualities and Qualifications*, p. 167.

She was kind.
She was patient.
She was willing to help you.
She made you feel at ease.
She made you feel like you had learned something.
She made interesting projects for us to work on and she was interested in our work and made us more happy.
Good looking and dressed nicely.
She treated all the pupils alike.
She gave each pupil equal rights.
She was always willing to help people.

Qualities Teachers Consider Important.—In their efforts to improve the quality of their teaching, teachers in schools have cooperated in preparing self-rating scales. In other school systems the self-rating sheets have been devised by supervisory officers to encourage teachers to think through their teaching competencies as a basis for a program of self-improvement. The faculty of the Glencoe (Illinois) schools has developed a teacher self-evaluation scale. (See pages 491-493.)

2. ACQUIRING AND MAINTAINING MENTAL HEALTH

Personality Adjustment.—Many of the causes of personality maladjustments have their origins in childhood experiences. A study by Symonds ⁴ of the needs of teachers as revealed in their autobiographies indicates that many of the feelings of inadequacy and insecurity among teachers can be traced to the overemphasis by parents and teachers of such matters as school achievement or slight deviations from the norm in personal appearance and behavior. The inner conflicts which arise as a result of the individual's inability to attain social acceptability and other desired goals represent a prolific source of personality maladjustment.

It is doubtful that a direct attack in which each undesirable personality trait is made the object of an intensive effort for improvement results in personality development. Since the traits function in combination, no one of them can be isolated for emphasis while all the others lie dormant. Likewise, resolutions by teachers not to be impatient, irritable, depressed, or dull do not always result in any material improvement.

In some teachers favorable qualities of personality seem almost to be inherited, they develop so early with so little conscious effort.

⁴ Percival M. Symonds, "The Needs of Teachers as Shown in Autobiographies," *Journal of Educational Research*, Vol. XXXVI, 672.

A. PROFESSIONAL RELATIONS	No Improvement Needed	Little Improvement Needed	Some Improvement Needed	Considerable Improvement Needed	Much Improvement Needed
1. Do I read professional literature in an attempt to increase my competence?					
2. Am I a participating, contributing member of the faculty organization?					
3. Do I assume my share of group responsibility?					
4. Do I have a genuine interest in professional organizations and utilize the opportunities afforded by them?					
5. Do I contribute to group thinking on problems of a general nature as well as those of particular interest to me?					
6. Am I genuinely tolerant of the opinions of others and open-minded on all matters under consideration?					
7. Having had an opportunity to voice my opinions, do I give wholehearted support to the decisions and accepted policies of the school without derogatory private comment?					
8. Do I inspire the confidence of the children by an understanding and friendly manner?					
9. Do I inspire the confidence of parents so that they feel free to talk frankly with me?					
10. Do I have the poise to withstand petty annoyance and maintain an emotional stability?					
11. Do I welcome opportunities to learn from and share with my fellow teachers and those in near-by schools?					
12. Have I sincere regard for and interest in the adjustment and development of beginning teachers and student teachers?					
13. Do I utilize opportunities for improving my professional competence through university study, travel, membership in study groups?					
14. Do I seek opportunities of broadening my experience and understanding through summer work of widely varied kinds quite apart from work with children?					
15. Am I as courteous to and thoughtful of children and colleagues as I expect them to be?					

B. NONPROFESSIONAL RELATIONS	No Improvement Needed	Little Improvement Needed	Some Improvement Needed	Considerable Improvement Needed	Much Improvement Needed
1. Do I keep myself currently informed on social and political affairs?					
2. Do I read widely for my personal enrichment?					
3. Have I some intensive interest or hobbies that I follow?					
4. Have I a wide variety of other interests?					
5. Do I make it a point to be outdoors enough?					
6. Is there some form of exercise that I enjoy regularly in each season?					
7. Do I take time for rest and relaxation even when busy?					
8. Do I set aside some time for things of the spirit, church worship or quiet thought, etc.?					
9. Do I maintain active social contacts with people outside the profession as well as in it?					
10. Am I able at times to "shed my profession" completely?					
11. Do I assume some responsibilities in the larger social sense, contributing time or services or money to needy causes or people?					
C. COMMUNITY RELATIONS					
1. Am I thoroughly informed on the setup and functioning of the village government?					
2. Am I familiar with organizations in the community and do I participate in or make use of their services? <div> <div> Woman's Library Club Junior Auxiliary Rotary Club Chamber of Commerce Threshold Players D. A. R. Garden Club </div> <div> Historical Society Community Council Scouts Local churches American Legion Others </div> </div>					
3. Do I make use of the facilities offered by the Park Board?					
4. Do I use and encourage the use of the local library?					
5. Am I aware of civic needs within the community? If so, do I seek opportunity to offer suggestions and support measures undertaken?					
6. Do I contribute within my means to charitable and religious activities in the community?					
7. Am I familiar with and do I utilize in my work with children the many facilities which the community has to offer?					
8. Do I make use of resource studies such as Com-					

D. TEACHER-PUPIL RELATIONSHIPS	No Improvement Needed	Little Improvement Needed	Some Improvement Needed	Considerable Improvement Needed	Much Improvement Needed
1. Do I recognize the value in group planning and provide for it?					
2. Do I guide children in their plans rather than dominate them?					
3. Do I encourage my children to do their own thinking?					
4. Do I realize the value of thinking in the learning process?					
5. Do I establish certain routine procedures and responsibilities?					
6. Are the arrangement and order of my room and materials conducive to individual and group control?					
7. Is my relationship with children one of sincerity and rapport?					
8. Do I recognize the needs of each of my children and provide for their individual difficulties?					
9. Do I take time for the problems and interests of the individuals of my group?					
10. Do the children of my group have a feeling of status and "belonging"?					
11. Do I recognize my mistakes and admit my inadequacies to children?					
12. Do my children respect me because of my contributions to the group and not because of my status as a teacher?					
13. Whenever possible, do I regard undesirable behavior as an educational opportunity and use it as such?					
14. Do I recognize and care for the fatigue element in the individual and group control?					
15. Do I encourage thoughtful evaluation and discussion on the part of my children rather than do most of the talking myself?					
16. Does my group give evidence that I strive for self-control rather than imposed control?					
17. Does our planning make provision for a definite quiet period?					
18. Do I use supervisory services effectively?					
19. Do I avoid overstimulation by careful guidance and selection when opportunities such as assemblies, movies, etc., are offered?					

In most teachers, at least a few of the traits have to be cultivated systematically over a considerable period of time. In some, practically all these traits have to be cultivated if they are to exist. Consequently, teachers vary a great deal with respect to the quality of teaching personality. Some persons of good minds and adequate or superior training are failures or at most very limited successes at teaching.

In a realistic program designed by the teacher to overcome her personality deficiencies, cognizance should be taken of the difficulty of eliminating maladjustments of long standing, especially if certain elements in the teaching situation aggravate the problems. A knowledge of some of the basic concepts of mental health should assist the teacher in meeting her own problems of personality adjustment as well as those encountered by her pupils.

Meaning and Significance of Mental Hygiene.—Mental health is an emotional and mental condition which is characterized by thought and behavior patterns which are satisfying to the individual and in reasonable harmony with the group of which she is a member. Life is a series of adjustments between the living organism and its social and physical environment. A well-adjusted individual is one who utilizes the resources available in her environment to meet her personal and social needs. Thus conceived, adjustment is the individual responsibility of each person.

Failure on the part of the individual to make adequate adjustments to her physical environment results in physical disharmony and ineffectiveness. The inability of the individual to adjust to her social environment results in the impairment of her personality. There are many degrees of mental illness, varying from the milder forms which are characterized by irritability and nervousness to the more serious types which are indicated by emotional instability, delusions, feelings of inferiority, moodiness, isolationism, imaginary persecution, and extreme melancholy. To the extent that human behavior patterns are specific, a person may be well adjusted to one situation and poorly adjusted to another. She may be well adjusted at one time in her life and not at another.

While the incidence of mental illness is high among teachers, they rank above the general population in respect to mental health. The really crucial issue involved in the mental maladjustment of teachers is its unwholesome effect upon pupils. Numerous investigations have revealed that the number of maladjusted pupils is much

greater in classes taught by poorly adjusted teachers than in the classes of well-adjusted teachers.

While the maintenance of mental health is largely an individual responsibility, there are present in many teaching situations certain factors which serve to intensify personal difficulties of long standing in the life of the teacher. In their extreme form, some of the unsatisfactory conditions under which teachers work may cause mental illness. In most instances, however, the conditions merely aggravate existing difficulties.

The factors which help and handicap a teacher in maintaining good mental health vary markedly from one teaching situation to another. In most instances the unwholesome influences can be modified or minimized and the wholesome features can be capitalized by an intelligent teacher. In the event the teacher's tendencies toward maladjustment and the undesirable factors in a teaching situation combine to produce a serious form of mental illness, the teacher should consult a psychiatrist or physician. Unless the difficulty can be eliminated, the teacher owes it to herself and her pupils to withdraw from teaching.

Program for Maintaining Mental Health.—Many less serious forms of mental disturbance can be removed by a prompt, practical, common-sense program, instituted and carried out by the teacher herself. The teacher who is desirous of maintaining good mental health may find some of the following suggestions helpful.

1. *Recognize the Significance of Teaching.* A clear vision of the social significance of teaching may be gained by a consideration of the opportunities the teacher has to make desirable changes in the thinking and behavior of children under her jurisdiction. Protecting the personality of the child from the forces that constantly tend to disintegrate it presents a challenge to the highest humanitarian instincts of the teacher. It should not be difficult for the teacher of courage and intelligence to realize the possibility of helping to create a better social order by teaching the truth about social and economic injustices. Charles Dickens declared his mission in life was "to make crooked places straight." Surely the teacher of today cannot be less of a crusader.

Unless the teacher can establish a strong faith in the improbability of the individual through the process of education, she should seek employment in a vocation more suited to her interests. Only a firm conviction that teaching is important can serve as a bulwark against the petty annoyances, irritations, and stresses of professional life.

The teacher who likes people and is genuinely interested in their

welfare experiences little difficulty in developing a strong interest in teaching. Nothing short of a strong desire to help children meet their numerous complex problems can give purpose and dignity to the work of the teacher. Endeavors of teachers who seek more tangible rewards in the form of financial returns and social status are both disappointing and futile.

2. *Formulate a Sound Philosophy of Life.* Reference has been made in the preceding paragraphs to the teacher's need to accept a satisfactory philosophy of education which incorporates among other things a strong conviction in regard to the value of teaching as a form of human endeavor. This educational philosophy should be an aspect of a larger all-embracing philosophy of life. One's philosophy of life is a highly personal matter; however, sound social values should be given due recognition. A proper sense of values tends to give perspective and direction to one's life at all times, particularly in periods of extreme stress and strain. One teacher's set of values may vary considerably from that of another teacher, depending upon individual temperaments and experiences.

A teacher's mental health is highly dependent upon a guiding philosophy of life which is satisfying and gives purpose and direction to all her personal and professional activities. The details of an individual's philosophy of life are subject to constant modifications within the limits of its broader framework. A sound philosophy is ever evolving, always in the process of being acquired. It should, however, have sufficient stability to enable an individual always to relate his ideas and experiences to it; otherwise, it fails to be a guide to thought and action.

3. *Keep Physically Fit.* There is considerable evidence to indicate that a close relationship exists between physical and mental health. They are mutually dependent. An unsatisfactory condition of one contributes to the failure of the other. Adherence by the teacher to a sensible physical fitness program is therefore essential to the maintenance of mental health. In planning a physical health program consideration should be given to the simple rules of health, such as exercise, sufficient sleep, and a well-balanced diet. The indoor work of the teacher should be counterbalanced by outdoor recreational activities. Adequate provision should be made for relaxation from the work of the classroom by engaging in leisure-time activities which take one's mind away from one's work. Chronic fatigue and irritability may be symptoms of ailments which can be revealed by diagnosis and alleviated by competent medical treatment. The peri-

odic physical examination, which is recognized as essential for pupils, is likewise important for teachers. Undue worry over minor ailments is both a cause and a symptom of emotional instability.

4. *Cultivate a Sense of Humor.* It has been said facetiously that everyone needs a sense of humor to console him for what he *is* and a vivid imagination to compensate for what he *is not*. While the work of the teacher should be taken seriously, there is an ever-present danger that the teacher will take herself too seriously. In their excellent yearbook entitled *Fit to Teach*, a committee of the Department of Classroom Teachers of the N. E. A. stated that an individual should be able to laugh at other people, and with other people, and especially to laugh at himself. The position of the teacher tends to encourage pupils to accept her word as final authority. This acceptance of the teacher's ideas, without any questions asked, often causes her to overestimate the wisdom of her own words. Such an attitude may result in maladjustment of the teacher to out-of-school situations in which other persons may take issue with her.

In the classroom a sense of humor will often serve to "calm the troubled waters." The possessor of a sense of humor tends to avoid overemphasis upon minor difficulties and other trivial matters. To acquire a sense of humor, the teacher must learn to see matters in their true perspective and not to "engage in a major fight over a minor issue."

5. *Develop Strong Avocational Interests.* No one can prescribe leisure-time activities for another person. Each individual is free to "write his own ticket," to choose his activity or hobby. Aside from the practical limitations of money and time, the teacher because of her training should be able to make a wise choice of leisure-time activities. Certainly the teacher should have some strong intellectual interests beyond the requirements of her teaching. Hobbies in art, music, and books present opportunities to satisfy the creative and intellectual urge. If the need for achievement is not met by one's professional activities, gardening and use of materials may give a feeling of mastery that is conducive to mental health. Perhaps every person should engage in some activity "just for fun." The teacher who knows how to play seldom becomes blue, discouraged, or bored with life.

Beyond one's special interest in a hobby, a satisfactory leisure-time program should include a variety of activities which bring one into contact with people, music, poetry, and the beauty of nature. The sources of one's interests in activities in which she is free to engage

are numerous. A slight interest in a particular activity may grow, if properly cultivated, into an all-consuming enthusiasm which enhances and adds zest to professional activities.

The manner in which one engages in leisure-time activities also goes far to determine their value. The attainment of the objectives of carefully planned walks or tours often becomes a chore. When you take hikes or walks, do so without a definite destination. Let the caprice of the moment take you where it will. Leisure-time activities are important means of adding breadth and variety to one's vocational activities. They do not "compensate" for the drudgery of work in which a person has no real interest. If an individual likes her vocation, she will not find it necessary to think of avocational activities as merely something to counterbalance the displeasure she finds in her vocation.

6. *Know Yourself, Accept Yourself, and Be Yourself.* Objective self-analysis in which one assesses one's own strengths and weaknesses is difficult, but it is essential in overcoming deficiencies in personality development. Equally important is the discovery of the causes of one's maladjustment. An individual tends to overrate himself on those traits which appear to be important and underrate himself on those of little importance; for example, a person may underrate his handwriting ability, hence the common expression, "I cannot read my own handwriting," yet he seldom admits he is dishonest or untruthful.

The recognition of one's limitations should be accompanied by their acceptance. Attempts "to do the impossible" in terms of one's ability lead to discouragement and frustration. On the other hand, failure to utilize one's abilities fully and a shirking of responsibility tend to destroy the keen enjoyment of living.

Likewise necessary to mental health is the ability to discard all forms of pretense and be one's self. Efforts of teachers to identify themselves with persons in the self-styled socially elite class is tragic to both teacher and pupils. A well-known writer recently portrayed a teacher who was desirous of lifting herself out of her own social class by catering to all the "nice little boys and girls" from the wealthy families and ignoring and humiliating the children from the poorer homes. Teachers should recognize the dignity of a profession that serves "all the children of all the people." Indulgence in self-pity and expressions like "I am just a teacher" reveal a distressing type of vocational maladjustment with its concomitant lack of personal and social adjustment.

A study of the foregoing list of suggestions, along with others which might be added, reveals that the teacher's task of maintaining good mental health is similar to that of any other person. A useful summary of mental health precepts has been formulated by McKinney ⁵ as follows :

1. Keep yourself physically fit through hygienic habits of rest, exercise, diet, and cleanliness.
2. Face your troubles, worries, and fears; do what you can about them, then turn your attention to more pleasant things.
3. Have several absorbing hobbies, interests, social games, or sports in which you like to participate.
4. Guide your impulses and emotions in desirable channels rather than suppress them.
5. Strive to become a balanced personality instead of an extremist.
6. Develop a sense of humor; be willing to admit your own mistakes and laugh at yourself.
7. Have several major goals in the line of your abilities and enjoy working toward them.
8. Acquire real friends and companions who will share your fortunes and troubles.
9. Avoid strain; develop serenity, relax all muscles that are not necessary for the task at hand.
10. Build the habit of enjoying the present by drinking in the beauties of the world around you.
11. Be courageous in crises; don't run from them.
12. Grow daily by creating things yourself rather than being merely a spectator, dreamer, and nonproducing consumer. There is fun in striving.
13. Don't be overconscious of your uniqueness. Realize that most of us are ordinary people.
14. Realize time heals many wounds; be patient and hopeful.
15. Seek love, adventure, safety, and success—but be sure they are the kind that you can fully enjoy.
16. Develop your philosophy; know where you stand and adjust to the conditions you must meet.

Other Characteristics of Effective Teachers.—The extent to which teachers are successful in producing desirable changes in the attitudes and behavior of pupils is the measure of teaching effectiveness. Increasing knowledge and developing skills are only the means to those ends. There are certain characteristics of teachers which appear to be closely associated with teaching effectiveness. Reference to some of the qualities of successful teachers has been made in preceding sections of this chapter. In addition to those already

⁵ Reprinted by permission from *Psychology of Personal Adjustment*, 2d ed., by F. McKinney, published by John Wiley & Sons, Inc., 1949, pp 548-49.

mentioned the teacher of children in our present-day democracy should possess :

1. An understanding of children
2. An understanding of the times in which she is teaching
3. An abiding faith in education and the usefulness of teaching
4. A devotion to the ideals of democracy

1. *Understanding Children.* Understanding children involves a knowledge of human development, learning, and behavior. This information can be acquired by a study of the scientific facts which explain human growth in the terms of biology, psychology, and sociology. It is necessary, however, to supplement these facts with knowledge obtained by observation of, and association with, all types and conditions of men. Familiarity with the isolated factors in human development has little significance unless one is able to recognize their interdependence.

The prevailing idea that teachers, by the nature of their work, are necessarily isolated from life is erroneous. Every classroom is a psychological and sociological laboratory in the truest sense of the term. The teacher who is interested in people has unparalleled opportunities not only to observe at first hand the development of human beings but also to promote that growth. To the alert, intelligent teacher, the local community serves as a social laboratory to increase her understanding of human behavior. Careful study of children in school and out has given her significant insights into social living. Among the most important of these are :

1. The uniqueness of each individual child in regard to mental abilities, interests, social adaptability, and emotional drives
2. The potential contribution each individual can make to the general welfare
3. The need for a series of "common developmental tasks" in the education of all children
4. The advisability of withholding judgment of a child until all relevant facts are available
5. The necessity of recognizing that there is a *cause* underlying all forms of child behavior (An analysis of behavior usually reveals that an individual's "actions are based upon his past experiences, shaped by his present situation, and influenced by his desires and hopes for the future."⁶

2. *Understanding the Times.* Teachers who seek to assist children in making adjustments to the world in which they live must know

⁶ *Helping Teachers Understand Children*, Commission on Teacher Education of the American Council on Education, p. 8.

that world. They must be aware of the economic and social forces which shape the world and influence the thoughts and actions of men. They should be well informed in regard to the economic interdependence of the various peoples of the earth. They should be cognizant of the degree to which political democracy in some sections, and economic democracy in all sections, of our country has failed of attainment. Basic to service in democracy's schools is a realization that the cornerstone of democracy is respect for human personality, regardless of race, color, or creed.

A knowledge of America, her past struggles, her present strengths and weaknesses, and her aspirations for the future, should be part of the equipment of every American teacher. Above all she should recognize the dynamic character of our democracy and be tolerant of social and economic change. Finally, the teacher should be a student of international affairs with a full knowledge of the need for political and economic cooperation among all peoples.

3. *Faith in Education.* Our system of universal education is based upon a faith in the improvability of the individual through a process of formal education. This belief in the inherent value of the individual is linked with the idea that the existence of a democratic society is dependent upon the ability and willingness of society to provide the means of guaranteeing a constant flow of intelligent, well-informed citizens into its life stream.

It is essential that the teacher be convinced of the soundness of these assumptions. Unless she firmly believes that education is a potentially great force in the lives of men, the greatness of teaching will evade her. A blind acceptance of the significance of education is equally tragic. The teacher must recognize that education is not a formula which can lift men by magic out of their ignorance and selfishness. Human progress is painfully slow. Agencies other than the school influence the actions of mankind for good or ill. At times it may appear that the efforts of the school are fruitless, thwarted as they are by other forces. Only a vital, realistic program of public education can hope to counteract these influences. Herein lies the constant challenge to the teacher to vitalize her teaching.

In spite of the disappointing outcomes of many of the efforts of teachers, there is ample evidence to demonstrate the power of education. Unless a person senses the social significance of teaching, and unless she is desirous of rendering a service which will ennoble mankind, she should not engage in teaching.

4. *Devotion to Democratic Procedures.* Democracy is not achieved by a people in a single supreme effort and enjoyed forever afterwards. To be retained, it has to be rewon daily. Eternal democratic effort is the price of democracy. The school has the responsibility of rekindling the spirit and replenishing the substance of the democratic way of life.

The individual counts for much in terms of the general welfare in a democracy. It is of the greatest importance, therefore, that he be educated in schools dedicated to the principles of human rights, individual opportunities, and social responsibilities. Dictatorial practices in the classroom subdue and frustrate the child rather than assist him in becoming a self-directing, effective member of a democratic society.

A teacher who is intelligently devoted to the democratic process will in her relationships with pupils advance the general welfare by being concerned with the welfare of each child, regardless of his intelligence, race, social status, or economic condition. She guides the child to a recognition of the fact that in a democracy the individual has responsibilities as well as rights and privileges. She assists the child in translating democratic ideals into action in her daily association with other children in the classroom, on the playground, and at school dances, as well as in out-of-school activities. She arranges situations in which all the children will have meaningful experiences in sharing responsibility in planning, managing, and evaluating their own activities.

Managerial Abilities of Effective Teachers.—In the preceding sections of this chapter, emphasis has been placed upon desirable attitudes, outlooks, and understandings of the teacher. Some reference should be made to the abilities of the teacher as a leader of pupils in classroom activities. The qualities which characterize the effective teacher can be revealed by an actual record of a classroom situation in which the teacher

. . . guided students into stimulating learning activities in terms of their present interests and future needs. She assisted pupils in developing worthy purposes and goals. She led the pupils in the adventure of selecting and planning learning activities appropriate to the goals. The study of a variety of source materials was a vigorous process in which both pupils and teacher engaged. Individual and group responsibility was fostered. The pupils were enabled to interpret their classroom experiences in terms of everyday problems. New problems growing out of the present work were suggested by pupils. Individual pupil initiative was encouraged and recognized. Provision

was made for the special abilities, interests, and needs of individual pupils by appropriate types of projects, methods of procedure, and different required standards of proficiency. Pupil records of achievement were made in the form of test scores, statements of the pupil's contribution to the thinking of the group, and anecdotal material.

3. LIFE IN THE COMMUNITY

Values of Community Participation.—The superior teacher to-day recognizes the fact that the school is one of the more important community agencies. It is of and for the community. As a responsible leader in such an organization she cannot escape her responsibility of active participation in community life. Whether the people of the community expect it or not, the teacher should participate in all those activities of the community which have for their objectives the improvement of social and economic conditions. Her participation may not only serve to make those agencies more effective but also be of service to the school. Frequently the adverse criticism directed toward teachers is a result of a lack of acquaintance with and understanding of the teacher. If the person who hears derogatory statements in regard to the teacher's activities knows the teacher personally, he may properly discount the remarks. A teacher gains status in a community by assuming appropriate responsibilities in its affairs. Effective community participation is based upon an understanding of the resources, needs, and customs of the community.

As an adult individual, the teacher benefits immeasurably by association with mature adults. Perhaps nothing is more conducive to the impairment of the teacher's mental health than his exclusion from the normal social activities of adults. The teacher has been characterized as a "creature set apart" in the typical American community. Too often this is a self-imposed role. In most instances the apparent social ostracism can be overcome by the teacher's taking a genuine interest in the affairs of the community. The fact that the morals of the community may be different from those in other communities in which the teacher has lived should serve to stimulate rather than discourage her participation in community life.

Suggestions for Participation.—It is a truism to state that the teacher's primary responsibility is to teach the pupils enrolled in the school. This suggests that the teacher should exercise discrimination in regard to the type and number of community activities in which she participates. There is the ever-present danger that the teacher may dissipate her energies by becoming a "professional joiner" of

organizations which have little significance to her own or the community welfare. In making decisions in regard to which activities should be given priority, the teacher should give preference to those which are most closely related to the educational and social welfare of the youth of the community and to those which will give her opportunity for social relaxation. This decision is not as simple as it may appear, since the child's development is influenced by practically every aspect of his community environment. This suggests another important reason for the teacher to participate in community activities. Only as the growing youngster is considered against the background of community life is it possible to understand his attitudes, aspirations, and behavior.

Also the leadership of the teacher is needed in most communities in matters which tend to promote better racial relationships and more intelligent understanding by all the people of vital economic, political, and social issues. Effective community participation is dependent upon an understanding of the resources, needs, and customs of the community. Failure to recognize the peculiar social cleavages which exist in a community may result in the teacher's becoming identified with, if not actually embroiled in, factional rivalries, thus detracting from her usefulness as a potential leader. While the teacher has the right as a person and as a citizen to participate in those activities from which she derives the greatest satisfaction, the basic criterion is the probable effects of such participation upon her position as a responsible leader.

The Community and Teacher Behavior.—In the realm of moral values as well as in intellectual matters the teacher is expected to set an example of nobility and the "good life." Many of the important concomitants of learning, including the ideals of ethical behavior, are acquired by association with other persons. Especially during adolescence, example is stronger than precept. The parent who is not always careful about setting an example of exemplary conduct for his own children insists that the teacher do so. This responsibility of the teacher carries with it the opportunity to engage in the most effective kind of teaching. Henry Van Dyke said: "Knowledge may be gained from books, but the love of knowledge is transmitted only by personal contact."

In America, one of the main responsibilities of the teacher is to assist in making the ideals of democracy functional in the lives of children in our schools. To be effective in this respect the teacher's personal and professional conduct must personify democratic ideals.

In order that the effectiveness of the individual teacher may be increased and the welfare of the entire profession promoted, it is essential that the activities of teachers be in accord with ethical standards of conduct.

While it is not advisable for the community to restrict its teachers with minute regulations regarding the details of their personal or professional lives, the public through its school board has the right to choose whom it will employ as teachers, and it will employ those who conform to the moral and social standards of the community.

It is extremely difficult for the public to dissociate the teacher's professional activities from her personal life. Thus a teacher's effectiveness in the classroom is influenced in no small part by her reputation in the school and community. This idea of unity was expressed by Herbert Hoover in speaking at an annual convention of the Department of Superintendence when he said,

The public school teacher cannot live apart, he cannot separate his teaching from his daily work and conversation. He lives among his pupils during school hours, and among them and their parents all the time. . . . His office, like that of a minister of religion, demands of him an exceptional standard of conduct.

4. PROFESSIONAL ETHICS

The teaching profession, like most other professions, has formulated creeds or codes of professional ethics for the guidance of its members. The various state associations and the National Education Association have adopted and published statements of rules designed to govern the professional activities of teachers. The standards of conduct suggested in the codes may be classified into six areas of teacher relationships: (1) to the pupil, (2) to other teachers, (3) to the community, (4) to the profession, (5) to the administrative officers, and (6) to the board of education.

Code of the National Education Association.—While the details of content vary somewhat in the various state codes for teachers, they are all patterned largely on the Official Code of the National Education Association. The following condensed statement ⁷ of the code of the N. E. A. contains the main points of emphasis to be found in all the codes.

The teacher should be courteous, just, and professional in all relationships.

Desirable ethical standards require cordial relations between teacher and pupil, home and school.

⁷ "Ethics for Teachers: A Condensed Statement of the Code of the National Education Association," *Journal of the National Education Association*, Vol XXXIII, 117.

The conduct of the teacher should conform to the accepted patterns of behavior of the most wholesome members of the community.

The teacher should strive to improve educational practice through study, travel, and experimentation.

Unfavorable criticism of associates should be avoided except when made to proper officials

Testimonials regarding the teacher should be truthful and confidential.

Membership and active participation in local, state, and national professional associations are expected.

The teacher should avoid indorsement of all educational materials for personal gain.

Great care should be taken by the teacher to avoid interference between other teachers and pupils.

Fair salary schedules should be sought and when established carefully upheld by all professionals.

No teacher should knowingly underbid a rival for a position.

No teacher should accept compensation for helping another teacher to get a position or a promotion

Honorable contracts when signed should be respected by both parties and dissolved only by mutual consent.

Official business should be transacted only through properly designated officials.

The responsibility for reporting all matters harmful to the welfare of the school rests upon each teacher.

Professional growth should be stimulated through suitable recognition and promotion within the ranks.

Unethical practices should be reported to local, state, or national commissions on ethics.

The term "teacher" as used here includes all persons directly engaged in educational work.

Bill of Rights for Teachers.—The value of written codes has been questioned by many persons, as being "counsels of perfection" which no mortal can hope to observe. Admitting that the codes are idealistic, no one will doubt the importance of striving to attain the suggested standards. Another limitation of teacher's codes which is often mentioned is the "Thou shalt not" spirit which seems to permeate most of the codes. It should be remembered that a code is not a *bill of rights* for teachers. Perhaps teachers in this country should formulate a bill of rights containing items in regard to academic freedom, security of position, a living wage, etc., as part of their code of ethics, or as a separate instrument. An evolving bill of rights for teachers which was suggested by Schorling⁸ is as follows :

⁸ Raleigh Schorling in *The School of Education Bulletin*, Vol. XXVII, University of Michigan, 122-125.

1. The right to teach classes that are not too large—in general, from ten to twenty pupils
2. The right to have time in the school day for planning
3. The right to a 45-hour week
4. The right to adequate compensation for the full year of fifty-two weeks
5. The right to an adequate amount of helpful and constructive supervision
6. The right to have good materials and enough of them
7. The right to work in a room that, with the help of the students, can be made pleasant and appropriate to the tasks to be learned
8. The right to the same personal liberties which other respectable citizens assume for themselves as a matter of course
9. The right to an internship
10. The right to a realistic program of in-service education
11. The right to participate in modifying the curriculum and methods, and in formulating school policies
12. The right to keep from being lost in the profession

QUESTIONS, PROBLEMS, AND EXERCISES

1. Outline a program designed for the acquisition of a desirable personal trait.
2. Suggest how an individual might change or eliminate an undesired personal trait.
3. What are some of the symptoms of an inferiority complex in a teacher?
4. What are some of the factors which may influence social maladjustment among teachers?
5. Plan a schedule of your daily activities which provides time for recreational activities in addition to provision for those of a personal and professional character.
6. Prepare a paper in which you list your recreational interests, indicating the sources of these interests, and describe in some detail your favorite hobby.
7. What factors should a person take into account in considering teaching as a career?
8. Indicate how a teacher may acquire an effective teaching personality.
9. Recall the teachers you had in high school. How many of them exercised a lasting influence upon your thinking or behavior? Describe the most outstanding characteristics of those who did influence your thinking.
10. What are the chief values of self-rating devices for teachers?

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